STARTING $ALARIE$

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1986 SURVEY REPORT

STARTING SALARIES AND EMPLOYMENT STATUS OF CHEMISTRY AND CHEMICAL ENGINEERING GRADUATES

This report was prepared by
ACS Statistical Services

American Chemical Society
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ACKNOWLEDGMENTS

Each year, at the direction of its Joint Board-Council Committee on Economic Status, the American Chemical Society surveys chemistry and chemical engineering graduates to determine trends in starting salaries and employment status. Nguyen Bailey and Joan Burrelli of ACS Statistical Services, managed by John Robert Jones, conducted this year's survey and prepared this report.

Robert K. Neuman, Head
Department of Professional Services

SUMMARY OF FINDINGS

SALARIES

After two years of salary gains, salaries for inexperienced chemists and chemical engineers decreased in both current and constant dollars in 1986. Both chemistry and chemical engineering graduates experienced decreases in average salary for all degree levels, with the exception of PhD chemists. The decrease in starting salaries this year brought the means down to little more than those in 1984: in 1984, the mean salary for inexperienced BS chemists was $18,681; in 1986, it was $18,995.

Table 1 shows average starting salaries paid to inexperienced chemistry graduates for 1985 and 1986, and gives additional information concerning the variation among individual salaries within each group. Table 2 presents corresponding information for chemical engineering graduates.

For inexperienced chemists (those with less than 12 months of experience), 1986 mean starting salaries were:

$18,995 for the BS, down 3.6%, or in constant dollars down 4.8%
$24,065 for the MS, down 9.0%, or in constant dollars down 10.0%
$35,107 for the PhD, up 6.1%, or in constant dollars up 4.8%

Chemical engineers continue to receive larger starting salaries than do chemists with similar degrees. Among chemical engineers, the 1986 mean starting salaries were:

$26,899 for the BS, down 0.7%, or in constant dollars down 1.9%
$29,996 for the MS, down 2.4%, or in constant dollars down 3.6%
$39,485 for the PhD, down 3.7%, or in constant dollars down 4.8%

POST-GRADUATION EMPLOYMENT STATUS

Unemployment rates for chemists and chemical engineers were lower in 1986 than in 1985 for all degree levels. Unemployment rates for MS and PhD graduates are lower than those for BS graduates.

Unemployment of recent BS graduates is less severe in chemistry than it is in chemical engineering, but even in chemistry the problem is worse than the figures in Table 3 seem to indicate. To understand the extent of unemployment among new chemistry graduates requires an additional calculation. Because unemployment is defined as a fraction of the labor force, persons not seeking work are neither employed nor unemployed. An accurate reading of unemployment requires removing those not seeking employment from the denominator of the unemployment rate. Performing the calculation in this way yields larger unemployment rates among recipients of the bachelor's degree: 13% in chemistry and 21% in chemical engineering.

Table 1

STARTING YEARLY SALARIES OF INEXPERIENCED FULL-TIME EMPLOYED CHEMISTRY GRADUATES

by Degree: 1985 and 1986

Salaries	DEGREE LEVEL					
	Bachelor's		Master's		Ph.D.	
	1985	1986	1985	1986	1985	1986
90th Percentile	$24,772	$25,000	$32,100	$32,000	$38,880	$42,000
75th Percentile	22,800	22,250	30,000	28,500	37,725	40,000
50th Percentile	19,500	18,600	27,000	26,100	35,850	38,000
25th Percentile	17,000	15,000	23,500	20,500	30,000	32,000
10th Percentile	14,000	13,000	17,720	15,000	21,300	27,000
Mean	19,708	18,995	26,432	24,065	33,096	35,107
Count	296	175	45	20	92	43
Standard Deviation	4,200	6,744	5,886	7,697	6,977	8,781

Table 2

STARTING YEARLY SALARIES OF INEXPERIENCED FULL-TIME EMPLOYED CHEMICAL ENGINEERING GRADUATES

by Degree: 1985 and 1986

Salaries	DEGREE LEVEL					
	Bachelor's		Master's		Ph.D.	
	1985	1986	1985	1986	1985	1986
90th Percentile	$30,000	$31,000	$33,532	$36,000	$45,000	$45,500
75th Percentile	29,100	30,000	32,000	33,000	43,000	43,300
50th Percentile	28,020	28,360	31,400	31,000	40,000	41,500
25th Percentile	26,000	24,000	30,000	29,500	39,480	40,000
10th Percentile	22,100	20,000	26,000	22,000	38,000	30,000
Mean	27,099	26,899	30,742	29,996	40,993	39,485
Count	481	460	48	43	47	49
Standard Deviation	3,340	5,369	4,285	7,207	3,101	6,899

The recent history for unemployment calculated in this way is:

	1986	1985	1984	1983	1982	1981
Chemical Engineering	21%	22%	24%	42%	26%	8%
Chemistry	13	23	27	31	21	23

PLANS FOR ADVANCED STUDY and POSTDOCTORAL FELLOWSHIPS

A rough indicator of demand is postdoctoral fellows as a percent of new PhDs. Because some of the new doctoral chemists who accept postdoctoral fellowships would have preferred full-time employment, an increase in the fraction accepting such fellowships indicates insufficient full-time employment. This year, this measure of demand indicates that the climate is substantially less hospitable for both chemistry and chemical engineering graduates than it was last year. Among chemistry graduates, 46.7% accepted postdoctoral positions in 1986 as compared with 30.6% in 1985. Among chemical engineering graduates, 12.8% accepted such positions in 1986 as compared with 5.4% in 1985.

Bachelor's degree recipients' plans for advanced study are little different from those of last year's graduates. The anticipated field of study, however, has shifted somewhat for this year's graduates. Only 41% of BS chemistry graduates this year plan either full-time or part-time study in chemistry as compared to 50% last year. More BS chemistry graduates are choosing medicine, dentistry, or business this year than last. Among BS chemical engineering graduates, more are choosing chemical engineering majors this year than last. A summary of these plans appears in Tables 4 and 5.

CHEMISTRY GRADUATES WHO HAVE COMPLETED ACS APPROVED PROGRAMS

Graduates completing undergraduate chemistry programs approved by the ACS's Committee on Professional Training generally received higher starting salaries than graduates completing non-approved programs (see Table A-9). Among BS chemistry graduates planning full-time advanced study, almost 40% planned to study medicine. More than 70% of those studying medicine were in non-approved programs (see Table C-5). The unemployment rate for graduates of approved programs was somewhat lower (10% versus 18%) than that for graduates of non-approved programs.

CHARACTERISTICS OF DEGREE-GRANTING INSTITUTIONS AND EMPLOYERS

In 1983 and 1984, the Starting Salary Survey attempted to account for the variation in salaries paid to new bachelor's degree recipients, primarily by analyzing salary differences according to characteristics of the degree-granting institutions and size of the employer. The results of these surveys indicate that, generally speaking, graduates receive higher salaries if their degrees are from schools that are large, grant graduate degrees, or are privately controlled, and that chemists and chemical engineers employed by larger firms generally receive higher salaries than those employed by smaller firms.

Table 3

POSTGRADUATION STATUS OF CHEMISTRY AND
CHEMICAL ENGINEERING GRADUATES: FALL 1986

Major and Employment Status	Bachelor's	Master's	Doctorates
CHEMISTRY			
Full-time employed:			
In chemistry or chemical engineering	33.9%	42.6%	48.3%
Outside chemistry or chemical engineering	8.3	11.8	2.5
Grad. asst./postdoctoral or other fellowship	26.1	33.8	46.7
Unemployed and seeking full-time employment	10.4	4.4	2.5
Unemployed and not seeking full-time employment	21.2	7.4	0.0
Total	100.0	100.0	100.0
Number of responses	528	68	120
CHEMICAL ENGINEERING			
Full-time employed:			
In chemistry or chemical engineering	42.6	39.6	77.7
Outside chemistry or chemical engineering	19.1	8.3	6.4
Grad. asst./postdoctoral or other fellowship	14.2	38.2	12.8
Unemployed and seeking full-time employment	20.2	9.0	2.1
Unemployed and not seeking full-time employment	3.8	4.9	1.1
Total	100.0	100.0	100.0
Number of responses	936	144	94

Table 4

PLANS FOR FURTHER STUDY OF B.S. CHEMISTRY
AND CHEMICAL ENGINEERING GRADUATES: FALL 1986

Plans	Chemistry	Chemical Engineering
Further studies	58.4%	28.4%
Full-time	(48.6)	(19.2)
Part-time	(9.8)	(9.2)
No plans for further studies	41.5	71.6
Total	100.0	100.0
Number of responses	549	944

Table 5

FIELDS OF STUDY OF B.S. CHEMISTRY AND
CHEMICAL ENGINEERING GRADUATES WHO PLAN FURTHER STUDIES
Fall 1986

Field of Study	Chemistry	Chemical Engineering
FULL-TIME		
Chemistry or biochemistry	43.8%	2.2%
Chemical engineering	0.7	66.1
Medicine or dentistry	40.0	10.0
Business or management	3.0	8.3
All others	12.5	13.4
Total	100.0	100.0
Number of responses	267	180
PART-TIME		
Chemistry or biochemistry	29.6%	4.8%
Chemical engineering	0.0	25.0
Medicine or dentistry	1.9	0.0
Business or management	22.2	39.3
All others	46.3	30.9
Total	100.0	100.0
Number of responses	54	84

A wider range of salaries exists for chemists than for chemical engineers, partly because the type and size of school from which the new BS graduates receive their degrees is more variable for chemists than for chemical engineers. Proportionately more chemists than chemical engineers are clustered at the lower end of the salary range because proportionately more chemists than chemical engineers are employed in firms with less than 500 employees.

These differences ought to be taken into account, along with more obvious ones, when comparing salaries.

SCOPE AND METHOD

OBJECTIVES

The 1986 Starting Salary Survey is the 35th in the series of annual surveys now conducted by Statistical Services of the American Chemical Society. Summaries of the results of these surveys appear annually in the "Employment Outlook" edition of the Chemical and Engineering News. This year preliminary results were published on October 27.

The primary objective of the survey is to gather data on the starting salaries and occupational status of new chemists and chemical engineers who graduated during the 1985-86 academic year. The survey covers bachelor's, master's, and doctoral degree recipients. In addition, the survey provides information on graduates' sex, citizenship, and ethnicity.

METHOD OF COLLECTION AND TIMING OF SURVEY

Chemistry departments approved by the ACS and chemical engineering departments approved by the American Institute of Chemical Engineers and the Engineer's Council for Professional Development provided names and addresses of students that had graduated between September, 1985 and June, 1986. During Fall 1986, ACS Statistical Services mailed questionnaires to those graduates who had U.S. addresses. Summer 1985 graduates were excluded from the mailing because many of them had twelve months of experience by the time the survey was conducted.

EXTENT OF COVERAGE

Survey questionnaires were mailed between September and October to approximately 11,000 graduates. By the cutoff date of December 2, Statistical Services had received 2,051 usable responses. No attempt was made to examine the characteristics of graduates from departments that did not participate in the survey or of those graduates who did not mail back completed questionnaires.

DEFINITIONS

The questionnaire appears at the end of this report. Responses to questions on post-graduation status were edited to eliminate multiple responses and to reflect as accurately as possible the employment status of the respondent.

The term "inexperienced" as used in the tables refers to those who have 12 months or less of prior professional work experience. The term "chemist" refers to one who received a degree in chemistry. The term "chemical engineer" refers to one who received a degree in chemical engineering. Salary tables are based only on salaries of those who found full-time employment in chemistry or chemical engineering. Postdoctoral salaries are analyzed separately. Salaries are reported in U.S. dollars.

The Technical Notes present methods for estimating sampling error and also explain certain discrepancies among some of the tables.

TECHNICAL NOTES

DISCREPANCIES AMONG TABLES

Because not all individuals responded to all of the questionnaire items, some pairs of tables contain totals that should be identical but are not. For example, one table may group PhDs according to sex and another according to employer. The totals will differ unless the number who did not indicate their sex is the same as the number who did not indicate their employer.

ESTIMATES OF MEDIAN SALARIES

Median salaries displayed within the cells of the salary tables are sample medians and are therefore subject to sampling error. This error may be quite large, especially when the number of respondents in the corresponding cell is small. Therefore, median salaries in cells with fewer than 15 respondents should not be used to estimate their corresponding population medians. Similarly, tables showing the 25th and 75th salary percentiles, and those showing the 10th and 90th salary percentiles, should have at least 25 respondents and 40 respondents respectively.

COMPARING SALARIES

Often questions arise concerning women's salaries as compared with men's, or chemists' salaries as compared with chemical engineers'. These and similar comparisons require caution.

Statistical tests should be performed to determine whether observed differences in salaries of various sample groups could be mere chance occurrences resulting from peculiarities of the samples. Whether a difference in salaries is "statistically significant" depends not only on the magnitude of the difference but also on the sample sizes and the magnitudes of the sample standard deviations.

Statistical tests of significance may be found in Numerical and Statistical Techniques, by J. H. Pollard, Handbook of Tables for Probability and Statistics, published by the Chemical Rubber Company, and in other similar texts.

ESTIMATING SAMPLING ERROR FOR PERCENTS

Percents in this report are derived from the sample. If the entire population had received and returned questionnaires, most estimates would be somewhat different. How much different? Although this question does not have an exact answer, the table below does provide some guidance. To use the table, find the column headed by the percent (p) derived from the sample, and find the row appropriate for the sample size (n). (Approximations for p and n may be used.) Note the number in that column and that row of the table.

This number from the body of the table measures the precision with which the sample percent estimates the percent of the entire population. Specifically, if this procedure is applied repeatedly, about 95 times out of 100, the population percent will differ from the sample percent by no more than the amount shown in the table.

Approximate Sampling Errors for Percents

n	p= 10% or 90%	p= 20% or 80%	p= 30% or 70%	p= 40% or 60%	p= 50%
50	8.3%	11.1%	12.7%	13.6%	13.9%
100	5.9	7.8	9.0	9.6	9.8
200	4.2	5.5	6.4	6.8	6.9
500	2.6	3.5	4.0	4.3	4.4
1000	1.9	2.5	2.8	3.0	3.1
2000	1.3	1.8	2.0	2.1	2.2
5000	0.8	1.1	1.3	1.4	1.4
10000	0.6	0.8	0.9	1.0	1.0

In Table B-1a for example, 179 respondents classified as chemists indicated their highest degree as the bachelor's degree, and their employment status as employed full-time in chemistry or chemical engineering. The percent of this group who are women is listed as 44.1 percent (p=44.1). A "95% confidence interval" for this percent may be approximated by taking n and p to be about 200 and 40%. The table shows an approximate sampling error of 6.8%. Hence, the 95% confidence interval is 37.3% to 50.9%. If estimates were made at this "level of confidence" from 100 similar samples, about 95 of the confidence intervals calculated from these samples would contain the true population percent.

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TABLE A-1

SALARIES of CHEMISTS employed FULL-TIME
according to DEGREE and EXPERIENCE
1986 Starting Salary Survey

	HIGHEST DEGREE		
	BS	MS	PHD
WORK EXPERIENCE			
LESS THAN 12 MONTHS			
Median	18,600	26,100	38,000
Mean	18,995	24,065	35,107
Std Dev	6,744	7,697	8,781
Count	175	20	43
12 TO 36 MONTHS			
Median	19,500	25,900	35,000
Mean	20,379	26,575	28,643
Std Dev	4,981	4,696	10,181
Count	48	4	9
MORE THAN 36 MONTHS			
Median	26,750	32,000	39,000
Mean	27,436	32,076	38,105
Std Dev	2,912	5,456	10,881
Count	15	14	12
TOTAL			
Median	19,000	28,500	37,200
Mean	19,785	27,327	34,906
Std Dev	6,577	7,510	9,516
Count	238	38	64

TABLE A-2

SALARIES of CHEMICAL ENGINEERS employed FULL-TIME
according to DEGREE and EXPERIENCE
1986 ACS Starting Salary Survey

	HIGHEST DEGREE		
	BS	MS	PHD
WORK EXPERIENCE			
LESS THAN 12 MONTHS			
Median	28,360	31,000	41,500
Mean	26,899	29,996	39,485
Std Dev	5,369	7,207	6,899
Count	460	43	49
12 TO 36 MONTHS			
Median	30,000	31,368	43,500
Mean	28,976	30,090	43,195
Std Dev	4,235	4,449	4,520
Count	116	17	22
MORE THAN 36 MONTHS			
Median	26,000	41,940	41,900
Mean	26,044	42,901	44,522
Std Dev	3,302	8,888	9,145
Count	9	11	9
TOTAL			
Median	28,600	31,800	42,000
Mean	27,294	31,888	40,989
Std Dev	5,201	8,232	6,918
Count	585	71	80

TABLE A-3

SALARIES of INEXPERIENCED CHEMISTS employed FULL-TIME
in PRIVATE INDUSTRY according to SEX and DEGREE
1986 Starting Salary Survey

	HIGHEST DEGREE		
	BS	MS	PHD
SEX			
MEN			
Median	20,000	26,850	38,250
Mean	20,745	23,175	37,564
Std Dev	8,986	14,189	7,137
Count	64	5	28
WOMEN			
Median	20,000	28,200	40,000
Mean	20,474	27,796	43,500
Std Dev	4,639	4,176	8,386
Count	43	9	4
TOTAL			
Median	20,000	28,200	38,750
Mean	20,634	26,255	38,306
Std Dev	7,488	8,437	7,426
Count	107	14	32

TABLE A-4

SALARIES of INEXPERIENCED CHEMICAL ENGINEERS employed FULL-TIME in PRIVATE INDUSTRY according to DEGREE and SEX
1986 Starting Salary Survey

	HIGHEST DEGREE		
	BS	MS	PHD
SEX			
MEN			
Median	29,000	31,800	41,770
Mean	27,512	31,228	42,148
Std Dev	5,536	5,543	2,409
Count	258	29	26
WOMEN			
Median	29,450	31,000	42,000
Mean	28,396	28,563	42,433
Std Dev	3,472	10,534	1,891
Count	115	8	6
TOTAL			
Median	29,000	31,200	41,950
Mean	27,785	30,651	42,202
Std Dev	5,004	6,834	2,295
Count	373	37	32

TABLE A-5

SALARIES of INEXPERIENCED CHEMISTS employed FULL-TIME
according to DEGREE and SEX
1986 Starting Salary Survey

	HIGHEST DEGREE		
	BS	MS	PHD
SEX			
MEN			
Median	19,000	22,106	37,650
Mean	19,242	21,145	35,078
Std Dev	7,855	9,248	8,232
Count	104	10	36
WOMEN			
Median	18,000	27,900	38,000
Mean	18,641	26,985	35,259
Std Dev	4,751	4,602	12,015
Count	71	10	7
TOTAL			
Median	18,600	26,100	38,000
Mean	18,995	24,065	35,107
Std Dev	6,744	7,697	8,781
Count	175	20	43

TABLE A-6

SALARIES of INEXPERIENCED CHEMISTS employed FULL-TIME
according to DEGREE and EMPLOYER
1986 Starting Salary Survey

	HIGHEST DEGREE		
	BS	MS	PHD
EMPLOYER			
PRIVATE INDUSTRY			
Median	20,000	28,200	38,750
Mean	20,634	26,255	38,306
Std Dev	7,488	8,437	7,426
Count	107	14	32
COLLEGE OR UNIVERSITY			
Median	15,000	16,500	22,000
Mean	15,582	18,167	23,571
Std Dev	2,426	4,252	4,107
Count	13	3	7
HIGH SCHOOL			
Median	18,500	20,750	---
Mean	17,580	20,750	---
Std Dev	4,542	354	---
Count	5	2	0
FEDERAL GOVT			
Median	17,000	---	26,316
Mean	16,765	---	28,772
Std Dev	3,927	---	4,530
Count	6	0	3
MILITARY			
Median	18,000	---	---
Mean	16,455	---	---
Std Dev	5,317	---	---
Count	11	0	0
STATE OR LOCAL GOVT			
Median	18,517	22,106	32,500
Mean	18,720	22,106	32,500
Std Dev	2,406	0	0
Count	8	1	1
HOSPITAL OR LAB			
Median	14,845	---	---
Mean	15,173	---	---
Std Dev	2,942	---	---
Count	10	0	0
OTHER			
Median	13,000	---	---
Mean	15,093	---	---
Std Dev	5,775	---	---
Count	7	0	0
TOTAL			
Median	18,700	26,100	38,000
Mean	19,065	24,065	35,107
Std Dev	6,744	7,697	8,781
Count	167	20	43

TABLE A-7

SALARIES of INEXPERIENCED CHEMISTS employed FULL-TIME -MEN only
according to DEGREE and EMPLOYER
1986 Starting Salary Survey

	HIGHEST DEGREE		
	BS	MS	PHD
EMPLOYER			
PRIVATE INDUSTRY			
Median	20,000	25,850	38,250
Mean	20,745	23,175	37,564
Std Dev	8,986	14,189	7,137
Count	64	5	28
COLLEGE OR UNIVERSITY			
Median	14,500	16,500	23,000
Mean	15,367	18,167	24,083
Std Dev	2,868	4,252	4,248
Count	6	3	6
HIGH SCHOOL			
Median	16,200	21,000	---
Mean	17,350	21,000	---
Std Dev	5,211	0	---
Count	4	1	0
FEDERAL GOVT			
Median	16,695	---	34,000
Mean	16,695	---	34,000
Std Dev	3,260	---	0
Count	2	0	1
MILITARY			
Median	18,000	---	---
Mean	16,667	---	---
Std Dev	5,788	---	---
Count	9	0	0
STATE OR LOCAL GOVT			
Median	19,020	22,106	32,500
Mean	19,087	22,106	32,500
Std Dev	2,850	0	0
Count	5	1	1
HOSPITAL OR LAB			
Median	15,000	---	---
Mean	15,946	---	---
Std Dev	3,698	---	---
Count	5	0	0
OTHER			
Median	18,150	---	---
Mean	17,717	---	---
Std Dev	7,509	---	---
Count	3	0	0
TOTAL			
Median	19,000	22,106	37,650
Mean	19,370	21,145	35,078
Std Dev	7,883	9,248	8,232
Count	98	10	36

TABLE A-8

SALARIES of INEXPERIENCED CHEMISTS employed FULL-TIME - WOMEN only
according to DEGREE and EMPLOYER
1986 Starting Salary Survey

	HIGHEST DEGREE		
	BS	MS	PHD
EMPLOYER			
PRIVATE INDUSTRY			
Median	20,000	28,200	40,000
Mean	20,474	27,796	43,500
Std Dev	4,639	4,176	8,386
Count	43	9	4
COLLEGE OR UNIVERSITY			
Median	15,000	---	20,500
Mean	15,766	---	20,500
Std Dev	2,197	---	0
Count	7	0	1
HIGH SCHOOL			
Median	18,500	20,500	---
Mean	18,500	20,500	---
Std Dev	0	0	---
Count	1	1	0
FEDERAL GOVT			
Median	17,000	---	26,158
Mean	16,800	---	26,158
Std Dev	4,707	---	223
Count	4	0	2
MILITARY			
Median	15,500	---	---
Mean	15,500	---	---
Std Dev	3,536	---	---
Count	2	0	0
STATE OR LOCAL GOVT			
Median	17,824	---	---
Mean	18,108	---	---
Std Dev	1,767	---	---
Count	3	0	0
HOSPITAL OR LAB			
Median	14,000	---	---
Mean	14,400	---	---
Std Dev	2,074	---	---
Count	5	0	0
OTHER			
Median	11,750	---	---
Mean	13,125	---	---
Std Dev	4,131	---	---
Count	4	0	0
TOTAL			
Median	18,000	27,900	38,000
Mean	18,641	26,945	35,259
Std Dev	4,751	4,602	12,015
Count	69	10	7

TABLE A-9

SALARIES of INEXPERIENCED B.S. CHEMISTS employed FULL-TIME according to EMPLOYER and whether graduate completed ACS APPROVED CURRICULUM
1986 Starting Salary Survey

	CURRICULUM APPROVED?		TOTAL
	YES	NO	
EMPLOYER			
PRIVATE INDUSTRY			
Median	20,510	19,084	20,000
Mean	21,498	19,483	20,634
Std Dev	8,759	5,223	7,488
Count	60	47	107
COLLEGE OR UNIVERSITY			
Median	16,200	14,500	15,000
Mean	16,144	15,100	15,582
Std Dev	2,096	2,742	2,426
Count	6	7	13
HIGH SCHOOL			
Median	13,400	18,750	18,500
Mean	13,400	18,625	17,580
Std Dev	0	4,498	4,542
Count	1	4	5
FEDERAL GOVT			
Median	16,695	17,000	17,000
Mean	16,648	17,000	16,765
Std Dev	4,794	2,828	3,927
Count	4	2	6
MILITARY			
Median	18,000	17,500	18,000
Mean	16,000	17,250	16,455
Std Dev	6,245	3,862	5,317
Count	7	4	11
STATE OR LOCAL GOVT			
Median	19,020	17,824	18,517
Mean	19,387	17,608	18,720
Std Dev	2,347	2,507	2,406
Count	5	3	8
HOSPITAL OR LAB			
Median	14,690	15,000	14,845
Mean	15,390	14,667	15,173
Std Dev	3,269	2,517	2,942
Count	7	3	10
OTHER			
Median	19,000	10,250	13,000
Mean	20,717	10,875	15,093
Std Dev	3,734	1,436	5,775
Count	3	4	7
TOTAL			
Median	19,000	18,000	18,700
Mean	19,844	18,059	19,065
Std Dev	7,760	5,022	6,744
Count	93	74	167

TABLE A-10

SALARIES of INEXPERIENCED MS and PhD CHEMISTS employed FULL-TIME according to DEGREE and DEGREE SPECIALTY
1986 Starting Salary Survey

	HIGHEST DEGREE	
	MS	PHD
DEGREE SPECIALTY		
BIOCHEMISTRY		
Median	---	36,000
Mean	---	36,000
Std Dev	---	0
Count	0	1
ANALYTICAL CHEMISTRY		
Median	26,220	36,000
Mean	24,271	31,457
Std Dev	10,112	12,453
Count	9	7
INORGANIC CHEMISTRY		
Median	28,500	37,250
Mean	28,500	35,040
Std Dev	0	7,147
Count	1	10
ORGANIC CHEMISTRY		
Median	27,450	38,000
Mean	24,600	35,215
Std Dev	6,430	6,198
Count	5	14
PHYSICAL CHEMISTRY		
Median	21,303	39,400
Mean	21,303	36,250
Std Dev	1,136	12,895
Count	2	8
POLYMER CHEMISTRY		
Median	32,000	39,000
Mean	32,000	39,000
Std Dev	0	1,414
Count	1	2
OTHER CHEMISTRY		
Median	18,750	42,000
Mean	18,750	42,000
Std Dev	3,182	0
Count	2	1
TOTAL		
Median	26,100	38,000
Mean	24,065	35,107
Std Dev	7,697	8,781
Count	20	43

TABLE A-11

SALARIES of INEXPERIENCED CHEMICAL ENGINEERS employed FULL-TIME
according to DEGREE and SEX
1986 Starting Salary Survey

	HIGHEST DEGREE		
	BS	MS	PHD
SEX			
MEN			
Median	28,200	31,000	41,250
Mean	26,782	30,324	39,528
Std Dev	5,654	6,382	6,690
Count	318	35	42
WOMEN			
Median	28,750	31,000	42,000
Mean	27,161	28,563	39,229
Std Dev	4,676	10,534	8,653
Count	142	8	7
TOTAL			
Median	28,360	31,000	41,500
Mean	26,899	29,996	39,485
Std Dev	5,369	7,207	6,899
Count	460	43	49

TABLE A-12

SALARIES of INEXPERIENCED CHEMICAL ENGINEERS employed FULL-TIME
according to DEGREE and EMPLOYER
1986 Starting Salary Survey

	HIGHEST DEGREE		
	BS	MS	PHD
EMPLOYER			
PRIVATE INDUSTRY			
Median	29,000	31,200	41,950
Mean	27,785	30,651	42,202
Std Dev	5,004	6,834	2,295
Count	373	37	32
COLLEGE OR UNIVERSITY			
Median	17,000	---	35,250
Mean	17,290	---	34,644
Std Dev	10,610	---	9,730
Count	5	0	16
FEDERAL GOVT			
Median	23,170	28,500	---
Mean	23,971	28,500	---
Std Dev	2,920	2,121	---
Count	18	2	0
MILITARY			
Median	20,250	30,000	---
Mean	20,160	30,000	---
Std Dev	5,508	0	---
Count	20	1	0
STATE OR LOCAL GOVT			
Median	23,000	35,850	---
Mean	22,995	35,850	---
Std Dev	1,509	0	---
Count	23	1	0
HOSPITAL OR LAB			
Median	23,000	---	30,000
Mean	23,000	---	30,000
Std Dev	0	---	0
Count	1	0	1
OTHER			
Median	27,500	22,500	---
Mean	26,673	22,500	---
Std Dev	2,838	0	---
Count	15	1	0
TOTAL			
Median	28,360	31,000	41,500
Mean	26,895	30,463	39,485
Std Dev	5,320	6,603	6,899
Count	455	42	49

TABLE A-13

SALARIES of INEXPERIENCED CHEMICAL ENGINEERS employed FULL-TIME - MEN only
according to DEGREE and EMPLOYER
1986 Starting Salary Survey

	HIGHEST DEGREE		
	BS	MS	PHD
EMPLOYER			
PRIVATE INDUSTRY			
Median	29,000	31,800	41,770
Mean	27,512	31,228	42,148
Std Dev	5,536	5,543	2,409
Count	258	29	26
COLLEGE OR UNIVERSITY			
Median	29,500	---	35,500
Mean	29,500	---	35,620
Std Dev	0	---	9,225
Count	1	0	15
FEDERAL GOVT			
Median	24,000	28,500	---
Mean	25,275	28,500	---
Std Dev	2,382	2,121	---
Count	10	2	0
MILITARY			
Median	20,250	30,000	---
Mean	20,160	30,000	---
Std Dev	5,508	0	---
Count	20	1	0
STATE OR LOCAL GOVT			
Median	23,000	35,850	---
Mean	22,827	35,850	---
Std Dev	1,547	0	---
Count	14	1	0
HOSPITAL OR LAB			
Median	23,000	---	30,000
Mean	23,000	---	30,000
Std Dev	0	---	0
Count	1	0	1
OTHER			
Median	27,800	22,500	---
Mean	27,000	22,500	---
Std Dev	2,371	0	---
Count	11	1	0
TOTAL			
Median	28,200	31,400	41,250
Mean	26,740	30,910	39,528
Std Dev	5,613	5,436	6,690
Count	315	34	42

TABLE A-14

SALARIES of INEXPERIENCED CHEMICAL ENGINEERS employed FULL-TIME - WOMEN only
according to DEGREE and EMPLOYER
1986 Starting Salary Survey

	HIGHEST DEGREE		
	BS	MS	PHD
EMPLOYER			
PRIVATE INDUSTRY			
Median	29,450	31,000	42,000
Mean	28,396	28,563	42,433
Std Dev	3,472	10,534	1,891
Count	115	8	6
COLLEGE OR UNIVERSITY			
Median	15,700	---	20,000
Mean	14,238	---	20,000
Std Dev	9,380	---	0
Count	4	0	1
FEDERAL GOVT			
Median	23,085	---	---
Mean	22,504	---	---
Std Dev	2,890	---	---
Count	8	0	0
MILITARY			
Median	---	---	---
Mean	---	---	---
Std Dev	---	---	---
Count	0	0	0
STATE OR LOCAL GOVT			
Median	22,800	---	---
Mean	23,258	---	---
Std Dev	1,497	---	---
Count	9	0	0
HOSPITAL OR LAB			
Median	---	---	---
Mean	---	---	---
Std Dev	---	---	---
Count	0	0	0
OTHER			
Median	25,750	---	---
Mean	25,772	---	---
Std Dev	4,167	---	---
Count	4	0	0
TOTAL			
Median	28,800	31,000	42,000
Mean	27,242	28,563	39,229
Std Dev	4,595	10,534	8,653
Count	140	8	7

TABLE B-1a

CHEMISTRY GRADUATES
according to EMPLOYMENT STATUS, SEX, and DEGREE
1986 Starting Salary Survey

	BACHELORS			MASTERS			DOCTORATE		
	SEX								
	MEN	WOMEN	TOTAL	MEN	WOMEN	TOTAL	MEN	WOMEN	TOTAL
EMPLOYMENT STATUS									
Full-time in chemistry	100	79	179	19	10	29	49	9	58
Row Percent	55.9%	44.1%	100.0%	65.5%	34.5%	100.0%	84.5%	15.5%	100.0%
Column Percent	31.1%	38.3%	33.9%	44.2%	40.0%	42.6%	50.0%	40.9%	48.3%
Full-time in non-chemistry	29	15	44	4	4	8	2	1	3
Row Percent	65.9%	34.1%	100.0%	50.0%	50.0%	100.0%	66.7%	33.3%	100.0%
Column Percent	9.0%	7.3%	8.3%	9.3%	16.0%	11.8%	2.0%	4.5%	2.5%
Fellowship	91	47	138	18	5	23	46	10	56
Row Percent	65.9%	34.1%	100.0%	78.3%	21.7%	100.0%	82.1%	17.9%	100.0%
Column Percent	28.3%	22.8%	26.1%	41.9%	20.0%	33.8%	46.9%	45.5%	46.7%
Seeking employment	30	25	55	1	2	3	1	2	3
Row Percent	54.5%	45.5%	100.0%	33.3%	66.7%	100.0%	33.3%	66.7%	100.0%
Column Percent	9.3%	12.1%	10.4%	2.3%	8.0%	4.4%	1.0%	9.1%	2.5%
Not seek employment	72	40	112	1	4	5	0	0	0
Row Percent	64.3%	35.7%	100.0%	20.0%	80.0%	100.0%	0.0%	0.0%	0.0%
Column Percent	22.4%	19.4%	21.2%	2.3%	16.0%	7.4%	0.0%	0.0%	0.0%
TOTAL	322	206	528	43	25	68	98	22	120
Row Percent	61.0%	39.0%	100.0%	63.2%	36.8%	100.0%	81.7%	18.3%	100.0%
Column Percent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

TABLE B-1b

CHEMISTRY GRADUATES
according to PLANS FOR FURTHER STUDIES IN FALL 1986, SEX, and DEGREE
1986 Starting Salary Survey

	BACHELORS			MASTERS			DOCTORATE		
	SEX								
	MEN	WOMEN	TOTAL	MEN	WOMEN	TOTAL	MEN	WOMEN	TOTAL
FURTHER STUDIES									
NO PLANS	124	104	228	19	15	34	88	23	111
Row Percent	54.4%	45.6%	100.0%	55.9%	44.1%	100.0%	79.3%	20.7%	100.0%
Column Percent	36.8%	49.1%	41.5%	43.2%	60.0%	49.3%	88.9%	95.8%	90.2%
FULL-TIME	178	89	267	18	8	26	11	0	11
Row Percent	66.7%	33.3%	100.0%	69.2%	30.8%	100.0%	100.0%	0.0%	100.0%
Column Percent	52.8%	42.0%	48.6%	40.9%	32.0%	37.7%	11.1%	0.0%	8.9%
PART-TIME	35	19	54	7	2	9	0	1	1
Row Percent	64.8%	35.2%	100.0%	77.8%	22.2%	100.0%	0.0%	100.0%	100.0%
Column Percent	10.4%	9.0%	9.8%	15.9%	8.0%	13.0%	0.0%	4.2%	.8%
TOTAL	337	212	549	44	25	69	99	24	123
Row Percent	61.4%	38.6%	100.0%	63.8%	36.2%	100.0%	80.5%	19.5%	100.0%
Column Percent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

TABLE B-2a

CHEMISTRY GRADUATES
according to EMPLOYMENT STATUS, CITIZENSHIP, and DEGREE
1986 Starting Salary Survey

	BACHELORS				MASTERS				DOCTORATE			
	CITIZENSHIP											
	US NATIVE	US NATURALIZED	PERMANENT RESIDENT	OTHER VISA	US NATIVE	US NATURALIZED	PERMANENT RESIDENT	OTHER VISA	US NATIVE	US NATURALIZED	PERMANENT RESIDENT	OTHER VISA
EMPLOYMENT STATUS												
Full-time in chemistry	166	10	3	0	26	1	2	0	51	3	3	1
Row Percent	92.7%	5.6%	1.7%	0.0%	89.7%	3.4%	6.9%	0.0%	87.9%	5.2%	5.2%	1.7%
Column Percent	33.6%	47.6%	42.9%	0.0%	45.6%	33.3%	66.7%	0.0%	51.5%	100.0%	60.0%	7.7%
Full-time in non-chemistry	42	1	1	0	5	1	1	1	3	0	0	0
Row Percent	95.5%	2.3%	2.3%	0.0%	62.5%	12.5%	12.5%	12.5%	100.0%	0.0%	0.0%	0.0%
Column Percent	8.5%	4.8%	14.3%	0.0%	8.8%	33.3%	33.3%	20.0%	3.0%	0.0%	0.0%	0.0%
Fellowship	131	5	0	2	18	1	0	4	43	0	2	11
Row Percent	94.9%	3.6%	0.0%	1.4%	78.3%	4.3%	0.0%	17.4%	76.8%	0.0%	3.6%	19.6%
Column Percent	26.5%	23.8%	0.0%	40.0%	31.6%	33.3%	0.0%	80.0%	43.4%	0.0%	40.0%	84.6%
Seeking employment	50	0	2	3	3	0	0	0	2	0	0	1
Row Percent	90.9%	0.0%	3.6%	5.5%	100.0%	0.0%	0.0%	0.0%	66.7%	0.0%	0.0%	33.3%
Column Percent	10.1%	0.0%	28.6%	60.0%	5.3%	0.0%	0.0%	0.0%	2.0%	0.0%	0.0%	7.7%
Not seeking employment	105	5	1	0	5	0	0	0	0	0	0	0
Row Percent	94.6%	4.5%	.9%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Column Percent	21.3%	23.8%	14.3%	0.0%	8.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
TOTAL	494	21	7	5	57	3	3	5	99	3	5	13
Row Percent	93.7%	4.0%	1.3%	.9%	83.8%	4.4%	4.4%	7.4%	82.5%	2.5%	4.2%	10.8%
Column Percent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

TABLE B-2b

CHEMISTRY GRADUATES
according to PLANS FOR FURTHER STUDIES IN FALL 1986, CITIZENSHIP, and DEGREE
1986 Starting Salary Survey

	BACHELORS				MASTERS				DOCTORATE			
	CITIZENSHIP											
	US NATIVE	US NATURALIZED	PERMANENT RESIDENT	OTHER VISA	US NATIVE	US NATURALIZED	PERMANENT RESIDENT	OTHER VISA	US NATIVE	US NATURALIZED	PERMANENT RESIDENT	OTHER VISA
FURTHER STUDIES												
NO PLANS	216	6	4	2	28	2	3	1	93	3	5	10
Row Percent	94.7%	2.6%	1.8%	.9%	82.4%	5.9%	8.8%	2.9%	83.8%	2.7%	4.5%	9.0%
Column Percent	41.9%	28.6%	57.1%	40.0%	48.3%	66.7%	100.0%	20.0%	93.0%	75.0%	100.0%	71.4%
FULL-TIME	251	10	2	3	21	1	0	4	7	0	0	4
Row Percent	94.4%	3.8%	.8%	1.1%	80.8%	3.8%	0.0%	15.4%	63.6%	0.0%	0.0%	36.4%
Column Percent	48.7%	47.6%	28.6%	60.0%	36.2%	33.3%	0.0%	80.0%	7.0%	0.0%	0.0%	28.6%
PART-TIME	48	5	1	0	9	0	0	0	0	1	0	0
Row Percent	88.9%	9.3%	1.9%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%
Column Percent	9.3%	23.8%	14.3%	0.0%	15.5%	0.0%	0.0%	0.0%	0.0%	25.0%	0.0%	0.0%
TOTAL	515	21	7	5	58	3	3	5	100	4	5	14
Row Percent	94.0%	3.8%	1.3%	.9%	84.1%	4.3%	4.3%	7.2%	81.3%	3.3%	4.1%	11.4%
Column Percent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

TABLE B-3a

CHEMISTRY GRADUATES
according to EMPLOYMENT STATUS, ETHNICITY, and DEGREE
1986 Starting Salary Survey

	BACHELORS						MASTERS						DOCTORATE					
	RACIAL OR ETHNIC GROUP																	
	WHITE	BLACK	HISPANIC	AMER INDIAN	ASIAN	OTHER	WHITE	BLACK	HISPANIC	AMER INDIAN	ASIAN	OTHER	WHITE	BLACK	HISPANIC	AMER INDIAN	ASIAN	OTHER
EMPLOYMENT STATUS																		
Full-time in chemistry	164	6	2	1	5	0	26	2	1	0	0	0	51	0	1	0	6	0
Row Percent	92.1%	3.4%	1.1%	.6%	2.8%	0.0%	89.7%	6.9%	3.4%	0.0%	0.0%	0.0%	87.9%	0.0%	1.7%	0.0%	10.3%	0.0%
Column Percent	34.5%	54.5%	15.4%	33.3%	23.8%	0.0%	45.6%	66.7%	33.3%	0.0%	0.0%	0.0%	50.0%	0.0%	100.0%	0.0%	37.5%	0.0%
Full-time in non-chemistry	40	0	3	0	1	0	6	1	1	0	0	0	3	0	0	0	0	0
Row Percent	90.9%	0.0%	6.8%	0.0%	2.3%	0.0%	75.0%	12.5%	12.5%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Column Percent	8.4%	0.0%	23.1%	0.0%	4.8%	0.0%	10.5%	33.3%	33.3%	0.0%	0.0%	0.0%	2.9%	0.0%	0.0%	0.0%	0.0%	0.0%
Fellowship	124	1	5	1	5	2	17	0	1	0	4	1	46	0	0	0	9	1
Row Percent	89.9%	.7%	3.6%	.7%	3.6%	1.4%	73.9%	0.0%	4.3%	0.0%	17.4%	4.3%	82.1%	0.0%	0.0%	0.0%	16.1%	1.8%
Column Percent	26.1%	9.1%	38.5%	33.3%	23.8%	50.0%	29.8%	0.0%	33.3%	0.0%	100.0%	100.0%	45.1%	0.0%	0.0%	0.0%	56.3%	100.0%
Seeking employment	50	2	1	0	2	0	3	0	0	0	0	0	2	0	0	0	1	0
Row Percent	90.9%	3.6%	1.8%	0.0%	3.6%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	66.7%	0.0%	0.0%	0.0%	33.3%	0.0%
Column Percent	10.5%	18.2%	7.7%	0.0%	9.5%	0.0%	5.3%	0.0%	0.0%	0.0%	0.0%	0.0%	2.0%	0.0%	0.0%	0.0%	6.3%	0.0%
Not seeking employment	97	2	2	1	8	2	5	0	0	0	0	0	0	0	0	0	0	0
Row Percent	86.6%	1.8%	1.8%	.9%	7.1%	1.8%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Column Percent	20.4%	18.2%	15.4%	33.3%	38.1%	50.0%	8.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
TOTAL	475	11	13	3	21	4	57	3	3	0	4	1	102	0	1	0	16	1
Row Percent	90.1%	2.1%	2.5%	.6%	4.0%	.8%	83.8%	4.4%	4.4%	0.0%	5.9%	1.5%	85.0%	0.0%	.8%	0.0%	13.3%	.8%
Column Percent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	0.0%	100.0%	100.0%	100.0%	0.0%	100.0%	0.0%	100.0%	100.0%

TABLE B-35

CHEMISTRY GRADUATES
according to PLANS FOR FURTHER STUDIES IN FALL 1986, RACE, and DEGREE
1986 Starting Salary Survey

	BACHELORS						MASTERS						DOCTORATE					
	RACIAL OR ETHNIC GROUP																	
	WHITE	BLACK	HISPANIC	AMER INDIAN	ASIAN	OTHER	WHITE	BLACK	HISPANIC	AMER INDIAN	ASIAN	OTHER	WHITE	BLACK	HISPANIC	AMER INDIAN	ASIAN	OTHER
FURTHER STUDIES																		
NO PLANS	208	7	5	1	6	0	29	3	2	0	0	0	96	0	1	0	13	1
Row Percent	91.6%	3.1%	2.2%	.4%	2.6%	0.0%	85.3%	8.8%	5.9%	0.0%	0.0%	0.0%	86.5%	0.0%	.9%	0.0%	11.7%	.9%
Column Percent	42.1%	53.8%	38.5%	33.3%	28.6%	0.0%	50.0%	100.0%	66.7%	0.0%	0.0%	0.0%	93.2%	0.0%	100.0%	0.0%	72.2%	100.0%
FULL-TIME	236	5	7	2	13	4	20	0	1	0	4	1	7	0	0	0	4	0
Row Percent	88.4%	1.9%	2.6%	.7%	4.9%	1.5%	76.9%	0.0%	3.8%	0.0%	15.4%	3.8%	63.6%	0.0%	0.0%	0.0%	36.4%	0.0%
Column Percent	47.8%	38.5%	53.8%	66.7%	61.9%	100.0%	34.5%	0.0%	33.3%	0.0%	100.0%	100.0%	6.8%	0.0%	0.0%	0.0%	22.2%	0.0%
PART-TIME	50	1	1	0	2	0	9	0	0	0	0	0	0	0	0	0	1	0
Row Percent	92.6%	1.9%	1.9%	0.0%	3.7%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%
Column Percent	10.1%	7.7%	7.7%	0.0%	9.5%	0.0%	15.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.6%	0.0%
TOTAL	494	13	13	3	21	4	58	3	3	0	4	1	103	0	1	0	18	1
Row Percent	90.1%	2.4%	2.4%	.5%	3.8%	.7%	84.1%	4.3%	4.3%	0.0%	5.8%	1.4%	83.7%	0.0%	.8%	0.0%	14.6%	.8%
Column Percent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	0.0%	100.0%	100.0%	100.0%	0.0%	100.0%	0.0%	100.0%	100.0%

TABLE B-4a

BACHELORS CHEMISTRY GRADUATES
according to EMPLOYMENT STATUS and whether graduate completed ACS APPROVED CURRICULUM
1986 Starting Salary Survey

	CURRICULUM APPROVED?	
	YES	NO
EMPLOYMENT STATUS		
Full-time in chemistry	113	66
Row Percent	63.1%	36.9%
Column Percent	39.4%	27.4%
Full-time in non-chemistry	17	27
Row Percent	38.6%	61.4%
Column Percent	5.9%	11.2%
Fellowship	99	39
Row Percent	71.7%	28.3%
Column Percent	34.5%	16.2%
Seeking employment	25	30
Row Percent	45.5%	54.5%
Column Percent	8.7%	12.4%
Not seeking employment	33	79
Row Percent	29.5%	70.5%
Column Percent	11.5%	32.8%
TOTAL	287	241
Row Percent	54.4%	45.6%
Column Percent	100.0%	100.0%

TABLE B-4b

BACHELORS CHEMISTRY GRADUATES
according to PLANS FOR FURTHER STUDIES IN FALL 1986 and whether graduate completed ACS APPROVED CURRICULUM
1986 Starting Salary Survey

	CURRICULUM APPROVED?	
	YES	NO
FURTHER STUDIES		
NO PLANS	122	106
Row Percent	53.5%	46.5%
Column Percent	41.2%	41.9%
FULL-TIME	139	128
Row Percent	52.1%	47.9%
Column Percent	47.0%	50.6%
PART-TIME	35	19
Row Percent	64.8%	35.2%
Column Percent	11.8%	7.5%
TOTAL	296	253
Row Percent	53.9%	46.1%
Column Percent	100.0%	100.0%

TABLE B-5

MASTER'S CHEMISTRY GRADUATES
according to EMPLOYMENT STATUS, DEGREE SPECIALTY, and DEGREE
1986 Starting Salary Survey

	EMPLOYMENT STATUS				
	FT in chem	FT in nonchem	Fellow-ship	Seeking empl	Not seek empl
FIELD OF HIGHEST DEGREE					
BIOCHEMISTRY	2	0	6	1	3
Row Percent	16.7%	0.0%	50.0%	8.3%	25.0%
Column Percent	6.9%	0.0%	26.1%	33.3%	60.0%
ANALYTICAL CHEMISTRY	13	2	5	0	0
Row Percent	65.0%	10.0%	25.0%	0.0%	0.0%
Column Percent	44.8%	25.0%	21.7%	0.0%	0.0%
INORGANIC CHEMISTRY	3	0	5	0	0
Row Percent	37.5%	0.0%	62.5%	0.0%	0.0%
Column Percent	10.3%	0.0%	21.7%	0.0%	0.0%
ORGANIC CHEMISTRY	5	1	2	2	1
Row Percent	45.5%	9.1%	18.2%	18.2%	9.1%
Column Percent	17.2%	12.5%	8.7%	66.7%	20.0%
PHYSICAL CHEMISTRY	1	3	3	0	0
Row Percent	14.3%	42.9%	42.9%	0.0%	0.0%
Column Percent	3.4%	37.5%	13.0%	0.0%	0.0%
POLYMER CHEMISTRY	3	0	1	0	0
Row Percent	75.0%	0.0%	25.0%	0.0%	0.0%
Column Percent	10.3%	0.0%	4.3%	0.0%	0.0%
OTHER CHEMISTRY	2	2	1	0	1
Row Percent	33.3%	33.3%	16.7%	0.0%	16.7%
Column Percent	6.9%	25.0%	4.3%	0.0%	20.0%
TOTAL	29	8	23	3	5
Row Percent	42.6%	11.8%	33.8%	4.4%	7.4%
Column Percent	100.0%	100.0%	100.0%	100.0%	100.0%

TABLE B-6

PHD CHEMISTRY GRADUATES
according to EMPLOYMENT STATUS, DEGREE SPECIALTY, and DEGREE
1986 Starting Salary Survey

	EMPLOYMENT STATUS				
	FT in chem	FT in nonchem	Fellow-ship	Seeking empl	Not seek empl
FIELD OF HIGHEST DEGREE					
BIOCHEMISTRY	1	0	6	0	0
Row Percent	14.3%	0.0%	85.7%	0.0%	0.0%
Column Percent	1.7%	0.0%	10.7%	0.0%	0.0%
ANALYTICAL CHEMISTRY	14	0	5	0	0
Row Percent	73.7%	0.0%	26.3%	0.0%	0.0%
Column Percent	24.1%	0.0%	8.9%	0.0%	0.0%
INORGANIC CHEMISTRY	12	0	6	1	0
Row Percent	63.2%	0.0%	31.6%	5.3%	0.0%
Column Percent	20.7%	0.0%	10.7%	33.3%	0.0%
ORGANIC CHEMISTRY	19	0	23	0	0
Row Percent	45.2%	0.0%	54.8%	0.0%	0.0%
Column Percent	32.8%	0.0%	41.1%	0.0%	0.0%
PHYSICAL CHEMISTRY	10	2	12	2	0
Row Percent	38.5%	7.7%	46.2%	7.7%	0.0%
Column Percent	17.2%	66.7%	21.4%	66.7%	0.0%
POLYMER CHEMISTRY	2	0	1	0	0
Row Percent	66.7%	0.0%	33.3%	0.0%	0.0%
Column Percent	3.4%	0.0%	1.8%	0.0%	0.0%
OTHER CHEMISTRY	0	1	3	0	0
Row Percent	0.0%	25.0%	75.0%	0.0%	0.0%
Column Percent	0.0%	33.3%	5.4%	0.0%	0.0%
TOTAL	58	3	56	3	0
Row Percent	48.3%	2.5%	46.7%	2.5%	0.0%
Column Percent	100.0%	100.0%	100.0%	100.0%	0.0%

TABLE B-7a

CHEMICAL ENGINEERING GRADUATES
according to EMPLOYMENT STATUS, SEX, and DEGREE
1986 Starting Salary Survey

	BACHELORS			MASTERS			DOCTORATE		
	SEX								
	MEN	WOMEN	TOTAL	MEN	WOMEN	TOTAL	MEN	WOMEN	TOTAL
EMPLOYMENT STATUS									
Full-time in chemistry	279	120	399	42	15	57	60	13	73
Row Percent	69.9%	30.1%	100.0%	73.7%	26.3%	100.0%	82.2%	17.8%	100.0%
Column Percent	40.8%	47.6%	42.6%	37.8%	45.5%	39.6%	77.9%	76.5%	77.7%
Full-time in non-chemistry	128	51	179	9	3	12	6	0	6
Row Percent	71.5%	28.5%	100.0%	75.0%	25.0%	100.0%	100.0%	0.0%	100.0%
Column Percent	18.7%	20.2%	19.1%	8.1%	9.1%	8.3%	7.8%	0.0%	6.4%
Fellowship	108	25	133	44	11	55	9	3	12
Row Percent	81.2%	18.8%	100.0%	80.0%	20.0%	100.0%	75.0%	25.0%	100.0%
Column Percent	15.8%	9.9%	14.2%	39.6%	33.3%	38.2%	11.7%	17.6%	12.8%
Seeking employment	140	49	189	12	1	13	2	0	2
Row Percent	74.1%	25.9%	100.0%	92.3%	7.7%	100.0%	100.0%	0.0%	100.0%
Column Percent	20.5%	19.4%	20.2%	10.8%	3.0%	9.0%	2.6%	0.0%	2.1%
Not seeking employment	29	7	36	4	3	7	0	1	1
Row Percent	80.6%	19.4%	100.0%	57.1%	42.9%	100.0%	0.0%	100.0%	100.0%
Column Percent	4.2%	2.8%	3.8%	3.6%	9.1%	4.9%	0.0%	5.9%	1.1%
TOTAL	684	252	936	111	33	144	77	17	94
Row Percent	73.1%	26.9%	100.0%	77.1%	22.9%	100.0%	81.9%	18.1%	100.0%
Column Percent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

TABLE B-7b

CHEMICAL ENGINEERING GRADUATES
according to PLANS FOR FURTHER STUDIES IN FALL 1986, SEX, and DEGREE
1986 Starting Salary Survey

	BACHELORS			MASTERS			DOCTORATE		
	SEX								
	MEN	WOMEN	TOTAL	MEN	WOMEN	TOTAL	MEN	WOMEN	TOTAL
FURTHER STUDIES									
NO PLANS	475	201	676	60	14	74	75	17	92
Row Percent	70.3%	29.7%	100.0%	81.1%	18.9%	100.0%	81.5%	18.5%	100.0%
Column Percent	69.1%	78.2%	71.6%	53.1%	42.4%	50.7%	97.4%	100.0%	97.9%
FULL-TIME	145	36	181	47	15	62	1	0	1
Row Percent	80.1%	19.9%	100.0%	75.8%	24.2%	100.0%	100.0%	0.0%	100.0%
Column Percent	21.1%	14.0%	19.2%	41.6%	45.5%	42.5%	1.3%	0.0%	1.1%
PART-TIME	67	20	87	6	4	10	1	0	1
Row Percent	77.0%	23.0%	100.0%	60.0%	40.0%	100.0%	100.0%	0.0%	100.0%
Column Percent	9.8%	7.8%	9.2%	5.3%	12.1%	6.8%	1.3%	0.0%	1.1%
TOTAL	687	257	944	113	33	146	77	17	94
Row Percent	72.8%	27.2%	100.0%	77.4%	22.6%	100.0%	81.9%	18.1%	100.0%
Column Percent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

TABLE B-8a

CHEMICAL ENGINEERING GRADUATES
according to EMPLOYMENT STATUS, CITIZENSHIP, and DEGREE
1986 Starting Salary Survey

	BACHELORS				MASTERS				DOCTORATE			
	CITIZENSHIP											
	US NATIVE	US NATURALIZED	PERMANENT RESIDENT	OTHER VISA	US NATIVE	US NATURALIZED	PERMANENT RESIDENT	OTHER VISA	US NATIVE	US NATURALIZED	PERMANENT RESIDENT	OTHER VISA
EMPLOYMENT STATUS												
Full-time in chemistry	387	5	7	0	47	3	5	2	55	2	7	9
Row Percent	97.0%	1.3%	1.8%	0.0%	82.5%	5.3%	8.8%	3.5%	75.3%	2.7%	9.6%	12.3%
Column Percent	43.8%	18.5%	33.3%	0.0%	43.5%	50.0%	41.7%	11.1%	88.7%	100.0%	63.6%	47.4%
Full-time in non-chemistry	169	7	3	0	10	1	1	0	3	0	0	3
Row Percent	94.4%	3.9%	1.7%	0.0%	83.3%	8.3%	8.3%	0.0%	50.0%	0.0%	0.0%	50.0%
Column Percent	19.1%	25.9%	14.3%	0.0%	9.3%	16.7%	8.3%	0.0%	4.8%	0.0%	0.0%	15.8%
Fellowship	123	5	3	2	37	2	1	15	2	0	3	7
Row Percent	92.5%	3.8%	2.3%	1.5%	67.3%	3.6%	1.8%	27.3%	16.7%	0.0%	25.0%	58.3%
Column Percent	13.9%	18.5%	14.3%	50.0%	34.3%	33.3%	8.3%	83.3%	3.2%	0.0%	27.3%	36.8%
Seeking employment	175	7	6	1	7	0	5	1	1	0	1	0
Row Percent	92.6%	3.7%	3.2%	.5%	53.8%	0.0%	38.5%	7.7%	50.0%	0.0%	50.0%	0.0%
Column Percent	19.8%	25.9%	28.6%	25.0%	6.5%	0.0%	41.7%	5.6%	1.6%	0.0%	9.1%	0.0%
Not seeking employment	30	3	2	1	7	0	0	0	1	0	0	0
Row Percent	83.3%	8.3%	5.6%	2.8%	100.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
Column Percent	3.4%	11.1%	9.5%	25.0%	6.5%	0.0%	0.0%	0.0%	1.6%	0.0%	0.0%	0.0%
TOTAL	884	27	21	4	108	6	12	18	62	2	11	19
Row Percent	94.4%	2.9%	2.2%	.4%	75.0%	4.2%	8.3%	12.5%	66.0%	2.1%	11.7%	20.2%
Column Percent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

TABLE B-8b

CHEMICAL ENGINEERING GRADUATES
according to PLANS FOR FURTHER STUDIES IN FALL 1986, CITIZENSHIP, and DEGREE
1986 Starting Salary Survey

	BACHELORS				MASTERS				DOCTORATE			
	CITIZENSHIP											
	US NATIVE	US NATURALIZED	PERMANENT RESIDENT	OTHER VISA	US NATIVE	US NATURALIZED	PERMANENT RESIDENT	OTHER VISA	US NATIVE	US NATURALIZED	PERMANENT RESIDENT	OTHER VISA
FURTHER STUDIES												
NO PLANS	648	16	12	0	58	4	9	3	62	1	10	19
Row Percent	95.9%	2.4%	1.8%	0.0%	78.4%	5.4%	12.2%	4.1%	67.4%	1.1%	10.9%	20.7%
Column Percent	72.8%	55.2%	57.1%	0.0%	53.2%	66.7%	75.0%	15.8%	100.0%	50.0%	90.9%	100.0%
FULL-TIME	164	9	5	3	44	2	1	15	0	0	1	0
Row Percent	90.6%	5.0%	2.8%	1.7%	71.0%	3.2%	1.6%	24.2%	0.0%	0.0%	100.0%	0.0%
Column Percent	18.4%	31.0%	23.8%	75.0%	40.4%	33.3%	8.3%	78.9%	0.0%	0.0%	9.1%	0.0%
PART-TIME	78	4	4	1	7	0	2	1	0	1	0	0
Row Percent	89.7%	4.6%	4.6%	1.1%	70.0%	0.0%	20.0%	10.0%	0.0%	100.0%	0.0%	0.0%
Column Percent	8.8%	13.8%	19.0%	25.0%	6.4%	0.0%	16.7%	5.3%	0.0%	50.0%	0.0%	0.0%
TOTAL	890	29	21	4	109	6	12	19	62	2	11	19
Row Percent	94.3%	3.1%	2.2%	.4%	74.7%	4.1%	8.2%	13.0%	66.0%	2.1%	11.7%	20.2%
Column Percent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

TABLE B-9a

CHEMICAL ENGINEERING GRADUATES
according to EMPLOYMENT STATUS, ETHNICITY, and DEGREE
1986 Starting Salary Survey

	BACHELORS					MASTERS					DOCTORATE				
	RACIAL OR ETHNIC GROUP														
	WHITE	BLACK	HISPANIC	ASIAN	OTHER	WHITE	BLACK	HISPANIC	ASIAN	OTHER	WHITE	BLACK	HISPANIC	ASIAN	OTHER
EMPLOYMENT STATUS															
Full-time in chemistry	371	9	3	14	2	44	0	2	10	0	56	2	4	11	0
Row Percent	93.0%	2.3%	.8%	3.5%	.5%	78.6%	0.0%	3.6%	17.9%	0.0%	76.7%	2.7%	5.5%	15.1%	0.0%
Column Percent	43.1%	56.3%	23.1%	35.0%	33.3%	42.7%	0.0%	66.7%	31.3%	0.0%	87.5%	100.0%	66.7%	50.0%	0.0%
Full-time in non-chemistry	164	1	4	10	0	9	0	0	2	0	4	0	1	1	0
Row Percent	91.6%	.6%	2.2%	5.6%	0.0%	81.8%	0.0%	0.0%	18.2%	0.0%	66.7%	0.0%	16.7%	16.7%	0.0%
Column Percent	19.0%	6.3%	30.8%	25.0%	0.0%	8.7%	0.0%	0.0%	6.3%	0.0%	6.3%	0.0%	16.7%	4.5%	0.0%
Fellowship	117	3	2	9	2	36	1	1	15	1	2	0	1	9	0
Row Percent	88.0%	2.3%	1.5%	6.8%	1.5%	66.7%	1.9%	1.9%	27.8%	1.9%	16.7%	0.0%	8.3%	75.0%	0.0%
Column Percent	13.6%	18.8%	15.4%	22.5%	33.3%	35.0%	50.0%	33.3%	46.9%	100.0%	3.1%	0.0%	16.7%	40.9%	0.0%
Seeking employment	178	3	4	3	1	8	1	0	4	0	1	0	0	1	0
Row Percent	94.2%	1.6%	2.1%	1.6%	.5%	61.5%	7.7%	0.0%	30.8%	0.0%	50.0%	0.0%	0.0%	50.0%	0.0%
Column Percent	20.7%	18.8%	30.8%	7.5%	16.7%	7.8%	50.0%	0.0%	12.5%	0.0%	1.6%	0.0%	0.0%	4.5%	0.0%
Not seeking employment	31	0	0	4	1	6	0	0	1	0	1	0	0	0	0
Row Percent	86.1%	0.0%	0.0%	11.1%	2.8%	85.7%	0.0%	0.0%	14.3%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%
Column Percent	3.6%	0.0%	0.0%	10.0%	16.7%	5.8%	0.0%	0.0%	3.1%	0.0%	1.6%	0.0%	0.0%	0.0%	0.0%
TOTAL	861	16	13	40	6	103	2	3	32	1	64	2	6	22	0
Row Percent	92.0%	1.7%	1.4%	4.3%	.6%	73.0%	1.4%	2.1%	22.7%	.7%	68.1%	2.1%	6.4%	23.4%	0.0%
Column Percent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	0.0%

TABLE B-9b

CHEMICAL ENGINEERING GRADUATES
according to PLANS FOR FURTHER STUDIES IN FALL 1986, RACE, and DEGREE
1986 Starting Salary Survey

	BACHELORS					MASTERS					DOCTORATE				
	RACIAL OR ETHNIC GROUP														
	WHITE	BLACK	HISPANIC	ASIAN	OTHER	WHITE	BLACK	HISPANIC	ASIAN	OTHER	WHITE	BLACK	HISPANIC	ASIAN	OTHER
FURTHER STUDIES															
NO PLANS	626	13	12	25	0	56	1	2	14	0	64	2	6	20	0
Row Percent	92.6%	1.9%	1.8%	3.7%	0.0%	76.7%	1.4%	2.7%	19.2%	0.0%	69.6%	2.2%	6.5%	21.7%	0.0%
Column Percent	72.3%	76.5%	92.3%	59.5%	0.0%	53.8%	33.3%	66.7%	43.8%	0.0%	100.0%	100.0%	100.0%	90.9%	0.0%
FULL-TIME	162	2	1	13	3	42	1	1	16	1	0	0	0	1	0
Row Percent	89.5%	1.1%	.6%	7.2%	1.7%	68.9%	1.6%	1.6%	26.2%	1.6%	0.0%	0.0%	0.0%	100.0%	0.0%
Column Percent	18.7%	11.8%	7.7%	31.0%	50.0%	40.4%	33.3%	33.3%	50.0%	100.0%	0.0%	0.0%	0.0%	4.5%	0.0%
PART-TIME	78	2	0	4	3	6	1	0	2	0	0	0	0	1	0
Row Percent	89.7%	2.3%	0.0%	4.6%	3.4%	66.7%	11.1%	0.0%	22.2%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%
Column Percent	9.0%	11.8%	0.0%	9.5%	50.0%	5.8%	33.3%	0.0%	6.3%	0.0%	0.0%	0.0%	0.0%	4.5%	0.0%
TOTAL	866	17	13	42	6	104	3	3	32	1	64	2	6	22	0
Row Percent	91.7%	1.8%	1.4%	4.4%	.6%	72.7%	2.1%	2.1%	22.4%	.7%	68.1%	2.1%	6.4%	23.4%	0.0%
Column Percent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	0.0%

TABLE C-1

CHEMISTRY GRADUATES WHO PLAN PART-TIME STUDIES IN FALL 1986
according to FIELD OF ADVANCED STUDY, SEX, and DEGREE
1986 Starting Salary Survey

	BACHELORS			MASTERS			DOCTORATE		
	SEX								
	MEN	WOMEN	TOTAL	MEN	WOMEN	TOTAL	MEN	WOMEN	TOTAL
STUDY FIELD									
CHEMISTRY	9	5	14	4	0	4	0	1	1
Row Percent	64.3%	35.7%	100.0%	100.0%	0.0%	100.0%	0.0%	100.0%	100.0%
Column Percent	25.7%	26.3%	25.9%	57.1%	0.0%	44.4%	0.0%	100.0%	100.0%
OTHER PHYSICAL SCIENCE	3	2	5	0	0	0	0	0	0
Row Percent	60.0%	40.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Column Percent	8.6%	10.5%	9.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
OTHER ENGINEERING	4	1	5	1	0	1	0	0	0
Row Percent	80.0%	20.0%	100.0%	100.0%	0.0%	100.0%	0.0%	0.0%	0.0%
Column Percent	11.4%	5.3%	9.3%	14.3%	0.0%	11.1%	0.0%	0.0%	0.0%
BIOCHEMISTRY	2	0	2	0	0	0	0	0	0
Row Percent	100.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Column Percent	5.7%	0.0%	3.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
LIFE SCIENCE	1	1	2	0	0	0	0	0	0
Row Percent	50.0%	50.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Column Percent	2.9%	5.3%	3.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
MEDICINE	1	0	1	0	0	0	0	0	0
Row Percent	100.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Column Percent	2.9%	0.0%	1.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
PHARMACY	0	2	2	0	0	0	0	0	0
Row Percent	0.0%	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Column Percent	0.0%	10.5%	3.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
BUSINESS	10	2	12	2	0	2	0	0	0
Row Percent	83.3%	16.7%	100.0%	100.0%	0.0%	100.0%	0.0%	0.0%	0.0%
Column Percent	28.6%	10.5%	22.2%	28.6%	0.0%	22.2%	0.0%	0.0%	0.0%
EDUCATION	0	0	0	0	2	2	0	0	0
Row Percent	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	0.0%
Column Percent	0.0%	0.0%	0.0%	0.0%	100.0%	22.2%	0.0%	0.0%	0.0%
LAW	1	1	2	0	0	0	0	0	0
Row Percent	50.0%	50.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Column Percent	2.9%	5.3%	3.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
OTHER	4	5	9	0	0	0	0	0	0
Row Percent	44.4%	55.6%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Column Percent	11.4%	26.3%	16.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
TOTAL	35	19	54	7	2	9	0	1	1
Row Percent	64.8%	35.2%	100.0%	77.8%	22.2%	100.0%	0.0%	100.0%	100.0%
Column Percent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	0.0%	100.0%	100.0%

TABLE C-2

BACHELORS CHEMISTRY GRADUATES WHO PLAN PART-TIME STUDIES IN FALL 1986
according to FIELD OF ADVANCED STUDIES and whether graduate completed ACS APPROVED CURRICULUM
1986 Starting Salary Survey

	CURRICULUM APPROVED?		TOTAL
	YES	NO	
STUDY FIELD			
CHEMISTRY	10	4	14
Row Percent	71.4%	28.6%	100.0%
Column Percent	28.6%	21.1%	25.9%
OTHER PHYSICAL SCIENCE	1	4	5
Row Percent	20.0%	80.0%	100.0%
Column Percent	2.9%	21.1%	9.3%
OTHER ENGINEERING	4	1	5
Row Percent	80.0%	20.0%	100.0%
Column Percent	11.4%	5.3%	9.3%
BIOCHEMISTRY	2	0	2
Row Percent	100.0%	0.0%	100.0%
Column Percent	5.7%	0.0%	3.7%
LIFE SCIENCE	1	1	2
Row Percent	50.0%	50.0%	100.0%
Column Percent	2.9%	5.3%	3.7%
MEDICINE	1	0	1
Row Percent	100.0%	0.0%	100.0%
Column Percent	2.9%	0.0%	1.9%
PHARMACY	1	1	2
Row Percent	50.0%	50.0%	100.0%
Column Percent	2.9%	5.3%	3.7%
BUSINESS	9	3	12
Row Percent	75.0%	25.0%	100.0%
Column Percent	25.7%	15.8%	22.2%
EDUCATION	0	0	0
Row Percent	0.0%	0.0%	0.0%
Column Percent	0.0%	0.0%	0.0%
LAW	2	0	2
Row Percent	100.0%	0.0%	100.0%
Column Percent	5.7%	0.0%	3.7%
OTHER	4	5	9
Row Percent	44.4%	55.6%	100.0%
Column Percent	11.4%	26.3%	16.7%
TOTAL	35	19	54
Row Percent	64.8%	35.2%	100.0%
Column Percent	100.0%	100.0%	100.0%
Row Percent	0.0%	0.0%	0.0%
Column Percent	0.0%	0.0%	0.0%
OTHER	0	0	0
Row Percent	0.0%	0.0%	0.0%
Column Percent	0.0%	0.0%	0.0%
TOTAL	9	0	9
Row Percent	100.0%	0.0%	100.0%
Column Percent	100.0%	0.0%	100.0%

TABLE C-3

CHEMICAL ENGINEERING GRADUATES WHO PLAN PART-TIME STUDIES IN FALL 1986
according to FIELD OF ADVANCED STUDY, SEX, and DEGREE
1986 Starting Salary Survey

	BACHELORS			MASTERS		
	SEX					
	MEN	WOMEN	TOTAL	MEN	WOMEN	TOTAL
STUDY FIELD						
CHEMISTRY	2	1	3	1	0	1
Row Percent	66.7%	33.3%	100.0%	100.0%	0.0%	100.0%
Column Percent	3.1%	5.0%	3.6%	16.7%	0.0%	10.0%
OTHER PHYSICAL SCIENCE	2	0	2	1	0	1
Row Percent	100.0%	0.0%	100.0%	100.0%	0.0%	100.0%
Column Percent	3.1%	0.0%	2.4%	16.7%	0.0%	10.0%
CHEMICAL ENGINEERING	15	6	21	3	1	4
Row Percent	71.4%	28.6%	100.0%	75.0%	25.0%	100.0%
Column Percent	23.4%	30.0%	25.0%	50.0%	25.0%	40.0%
OTHER ENGINEERING	15	4	19	0	1	1
Row Percent	78.9%	21.1%	100.0%	0.0%	100.0%	100.0%
Column Percent	23.4%	20.0%	22.6%	0.0%	25.0%	10.0%
BIOCHEMISTRY	1	0	1	0	0	0
Row Percent	100.0%	0.0%	100.0%	0.0%	0.0%	0.0%
Column Percent	1.6%	0.0%	1.2%	0.0%	0.0%	0.0%
LIFE SCIENCE	1	1	2	0	0	0
Row Percent	50.0%	50.0%	100.0%	0.0%	0.0%	0.0%
Column Percent	1.6%	5.0%	2.4%	0.0%	0.0%	0.0%
PHARMACY	0	0	0	0	1	1
Row Percent	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
Column Percent	0.0%	0.0%	0.0%	0.0%	25.0%	10.0%
BUSINESS	26	7	33	1	1	2
Row Percent	78.8%	21.2%	100.0%	50.0%	50.0%	100.0%
Column Percent	40.6%	35.0%	39.3%	16.7%	25.0%	20.0%
LAW	1	0	1	0	0	0
Row Percent	100.0%	0.0%	100.0%	0.0%	0.0%	0.0%
Column Percent	1.6%	0.0%	1.2%	0.0%	0.0%	0.0%
OTHER	1	1	2	0	0	0
Row Percent	50.0%	50.0%	100.0%	0.0%	0.0%	0.0%
Column Percent	1.6%	5.0%	2.4%	0.0%	0.0%	0.0%
TOTAL	64	20	84	6	4	10
Row Percent	76.2%	23.8%	100.0%	60.0%	40.0%	100.0%
Column Percent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

TABLE C-4

CHEMISTRY GRADUATES WHO PLAN FULL-TIME STUDIES IN FALL 1986
according to FIELD OF ADVANCED STUDY, SEX, and DEGREE
1986 Starting Salary Survey

	BACHELORS			MASTERS			DOCTORATE		
	SEX								
	MEN	WOMEN	TOTAL	MEN	WOMEN	TOTAL	MEN	WOMEN	TOTAL
STUDY FIELD									
CHEMISTRY	66	32	98	14	4	18	8	0	8
Row Percent	67.3%	32.7%	100.0%	77.8%	22.2%	100.0%	100.0%	0.0%	100.0%
Column Percent	37.1%	36.0%	36.7%	77.8%	50.0%	69.2%	72.7%	0.0%	72.7%
OTHER PHYSICAL SCIENCE	2	2	4	0	1	1	0	0	0
Row Percent	50.0%	50.0%	100.0%	0.0%	100.0%	100.0%	0.0%	0.0%	0.0%
Column Percent	1.1%	2.2%	1.5%	0.0%	12.5%	3.8%	0.0%	0.0%	0.0%
CHEMICAL ENGINEERING	0	2	2	0	0	0	0	0	0
Row Percent	0.0%	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Column Percent	0.0%	2.2%	.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
OTHER ENGINEERING	2	3	5	0	0	0	0	0	0
Row Percent	40.0%	60.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Column Percent	1.1%	3.4%	1.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
BIOCHEMISTRY	14	5	19	3	1	4	3	0	3
Row Percent	73.7%	26.3%	100.0%	75.0%	25.0%	100.0%	100.0%	0.0%	100.0%
Column Percent	7.9%	5.6%	7.1%	16.7%	12.5%	15.4%	27.3%	0.0%	27.3%
LIFE SCIENCE	4	1	5	0	0	0	0	0	0
Row Percent	80.0%	20.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Column Percent	2.2%	1.1%	1.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
MEDICINE	74	27	101	1	2	3	0	0	0
Row Percent	73.3%	26.7%	100.0%	33.3%	66.7%	100.0%	0.0%	0.0%	0.0%
Column Percent	41.6%	30.3%	37.8%	5.6%	25.0%	11.5%	0.0%	0.0%	0.0%
DENTISTRY	5	1	6	0	0	0	0	0	0
Row Percent	83.3%	16.7%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Column Percent	2.8%	1.1%	2.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
PHARMACY	1	3	4	0	0	0	0	0	0
Row Percent	25.0%	75.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Column Percent	.6%	3.4%	1.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
BUSINESS	6	2	8	0	0	0	0	0	0
Row Percent	75.0%	25.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Column Percent	3.4%	2.2%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
EDUCATION	0	2	2	0	0	0	0	0	0
Row Percent	0.0%	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Column Percent	0.0%	2.2%	.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
OTHER	4	9	13	0	0	0	0	0	0
Row Percent	30.8%	69.2%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Column Percent	2.2%	10.1%	4.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
TOTAL	178	89	267	18	8	26	11	0	11
Row Percent	66.7%	33.3%	100.0%	69.2%	30.8%	100.0%	100.0%	0.0%	100.0%
Column Percent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	0.0%	100.0%

TABLE C-5

BACHELORS CHEMISTRY GRADUATES WHO PLAN FULL-TIME STUDIES IN FALL 1986
according to FIELD OF ADVANCED STUDIES and whether graduate completed ACS APPROVED CURRICULUM
1986 Starting Salary Survey

	CURRICULUM APPROVED?		TOTAL
	YES	NO	
STUDY FIELD			
CHEMISTRY	76	22	98
Row Percent	77.6%	22.4%	100.0%
Column Percent	54.7%	17.2%	36.7%
OTHER PHYSICAL SCIENCE	3	1	4
Row Percent	75.0%	25.0%	100.0%
Column Percent	2.2%	.8%	1.5%
CHEMICAL ENGINEERING	1	1	2
Row Percent	50.0%	50.0%	100.0%
Column Percent	.7%	.8%	.7%
OTHER ENGINEERING	2	3	5
Row Percent	40.0%	60.0%	100.0%
Column Percent	1.4%	2.3%	1.9%
BIOCHEMISTRY	11	8	19
Row Percent	57.9%	42.1%	100.0%
Column Percent	7.9%	6.3%	7.1%
LIFE SCIENCE	3	2	5
Row Percent	60.0%	40.0%	100.0%
Column Percent	2.2%	1.6%	1.9%
MEDICINE	28	73	101
Row Percent	27.7%	72.3%	100.0%
Column Percent	20.1%	57.0%	37.8%
DENTISTRY	1	5	6
Row Percent	16.7%	83.3%	100.0%
Column Percent	.7%	3.9%	2.2%
PHARMACY	1	3	4
Row Percent	25.0%	75.0%	100.0%
Column Percent	.7%	2.3%	1.5%
BUSINESS	4	4	8
Row Percent	50.0%	50.0%	100.0%
Column Percent	2.9%	3.1%	3.0%
EDUCATION	2	0	2
Row Percent	100.0%	0.0%	100.0%
Column Percent	1.4%	0.0%	.7%
OTHER	7	6	13
Row Percent	53.8%	46.2%	100.0%
Column Percent	5.0%	4.7%	4.9%
TOTAL	139	128	267
Row Percent	52.1%	47.9%	100.0%
Column Percent	100.0%	100.0%	100.0%

TABLE C-6

CHEMICAL ENGINEERING GRADUATES WHO PLAN FULL-TIME STUDIES IN FALL 1986
according to FIELD OF ADVANCED STUDY, SEX, and DEGREE
1986 Starting Salary Survey

	BACHELORS			MASTERS		
	SEX					
	MEN	WOMEN	TOTAL	MEN	WOMEN	TOTAL
STUDY FIELD						
CHEMISTRY	3	1	4	1	0	1
Row Percent	75.0%	25.0%	100.0%	100.0%	0.0%	100.0%
Column Percent	2.1%	2.8%	2.2%	2.1%	0.0%	1.6%
OTHER PHYSICAL SCIENCE	2	0	2	0	0	0
Row Percent	100.0%	0.0%	100.0%	0.0%	0.0%	0.0%
Column Percent	1.4%	0.0%	1.1%	0.0%	0.0%	0.0%
CHEMICAL ENGINEERING	99	20	119	38	11	49
Row Percent	83.2%	16.8%	100.0%	77.6%	22.4%	100.0%
Column Percent	68.8%	55.6%	66.1%	80.9%	73.3%	79.0%
OTHER ENGINEERING	6	6	12	2	1	3
Row Percent	50.0%	50.0%	100.0%	66.7%	33.3%	100.0%
Column Percent	4.2%	16.7%	6.7%	4.3%	6.7%	4.8%
LIFE SCIENCE	1	1	2	0	0	0
Row Percent	50.0%	50.0%	100.0%	0.0%	0.0%	0.0%
Column Percent	.7%	2.8%	1.1%	0.0%	0.0%	0.0%
MEDICINE	13	5	18	2	1	3
Row Percent	72.2%	27.8%	100.0%	66.7%	33.3%	100.0%
Column Percent	9.0%	13.9%	10.0%	4.3%	6.7%	4.8%
PHARMACY	1	0	1	0	0	0
Row Percent	100.0%	0.0%	100.0%	0.0%	0.0%	0.0%
Column Percent	.7%	0.0%	.6%	0.0%	0.0%	0.0%
BUSINESS	14	1	15	2	1	3
Row Percent	93.3%	6.7%	100.0%	66.7%	33.3%	100.0%
Column Percent	9.7%	2.8%	8.3%	4.3%	6.7%	4.8%
LAW	3	1	4	1	0	1
Row Percent	75.0%	25.0%	100.0%	100.0%	0.0%	100.0%
Column Percent	2.1%	2.8%	2.2%	2.1%	0.0%	1.6%
OTHER	2	1	3	1	1	2
Row Percent	66.7%	33.3%	100.0%	50.0%	50.0%	100.0%
Column Percent	1.4%	2.8%	1.7%	2.1%	6.7%	3.2%
TOTAL	144	36	180	47	15	62
Row Percent	80.0%	20.0%	100.0%	75.8%	24.2%	100.0%
Column Percent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

TABLE C-7

CHEMISTRY BACHELORS DEGREE RECIPIENTS NOT EMPLOYED and NOT SEEKING EMPLOYMENT according to SEX and PLANS FOR FURTHER STUDIES
1986 Starting Salary Survey

	SEX		
	MEN	WOMEN	TOTAL
FURTHER STUDIES			
NO PLANS	3	2	5
Row Percent	60.0%	40.0%	100.0%
Column Percent	4.2%	5.0%	4.5%
FULL-TIME	68	37	105
Row Percent	64.8%	35.2%	100.0%
Column Percent	94.4%	92.5%	93.8%
PART-TIME	1	1	2
Row Percent	50.0%	50.0%	100.0%
Column Percent	1.4%	2.5%	1.8%
TOTAL	72	40	112
Row Percent	64.3%	35.7%	100.0%
Column Percent	100.0%	100.0%	100.0%

TABLE C-8

CHEMICAL ENGINEERING BACHELORS DEGREE RECIPIENTS NOT EMPLOYED and NOT SEEKING EMPLOYMENT according to SEX and PLANS FOR FURTHER STUDIES
1986 Starting Salary Survey

	SEX		
	MEN	WOMEN	TOTAL
FURTHER STUDIES			
NO PLANS	3	1	4
Row Percent	75.0%	25.0%	100.0%
Column Percent	10.3%	14.3%	11.1%
FULL-TIME	25	6	31
Row Percent	80.6%	19.4%	100.0%
Column Percent	86.2%	85.7%	86.1%
PART-TIME	1	0	1
Row Percent	100.0%	0.0%	100.0%
Column Percent	3.4%	0.0%	2.8%
TOTAL	29	7	36
Row Percent	80.6%	19.4%	100.0%
Column Percent	100.0%	100.0%	100.0%

TABLE D-1

CHEMISTRY and CHEMICAL ENGINEERING BACHELOR'S DEGREE RECIPIENTS
according to AGE and SEX
1986 Starting Salary Survey

	CHEMISTRY			CHEMICAL ENGINEERING		
	SEX					
	MEN	WOMEN	TOTAL	MEN	WOMEN	TOTAL
AGE CATEGORY						
18	0	0	0	1	0	1
Row Percent	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%
Column Percent	0.0%	0.0%	0.0%	.1%	0.0%	.1%
19	1	0	1	1	0	1
Row Percent	100.0%	0.0%	100.0%	100.0%	0.0%	100.0%
Column Percent	.3%	0.0%	.2%	.1%	0.0%	.1%
20	1	1	2	2	0	2
Row Percent	50.0%	50.0%	100.0%	100.0%	0.0%	100.0%
Column Percent	.3%	.5%	.4%	.3%	0.0%	.2%
21	24	30	54	46	26	72
Row Percent	44.4%	55.6%	100.0%	63.9%	36.1%	100.0%
Column Percent	7.1%	14.4%	9.9%	6.6%	10.1%	7.6%
22	171	93	264	287	128	415
Row Percent	64.8%	35.2%	100.0%	69.2%	30.8%	100.0%
Column Percent	50.6%	44.5%	48.3%	41.3%	49.8%	43.6%
23	72	40	112	230	74	304
Row Percent	64.3%	35.7%	100.0%	75.7%	24.3%	100.0%
Column Percent	21.3%	19.1%	20.5%	33.1%	28.8%	31.9%
24	24	13	37	57	13	70
Row Percent	64.9%	35.1%	100.0%	81.4%	18.6%	100.0%
Column Percent	7.1%	6.2%	6.8%	8.2%	5.1%	7.4%
25	11	4	15	16	4	20
Row Percent	73.3%	26.7%	100.0%	80.0%	20.0%	100.0%
Column Percent	3.3%	1.9%	2.7%	2.3%	1.6%	2.1%
26	8	5	13	13	5	18
Row Percent	61.5%	38.5%	100.0%	72.2%	27.8%	100.0%
Column Percent	2.4%	2.4%	2.4%	1.9%	1.9%	1.9%
27	5	6	11	7	3	10
Row Percent	45.5%	54.5%	100.0%	70.0%	30.0%	100.0%
Column Percent	1.5%	2.9%	2.0%	1.0%	1.2%	1.1%
28	9	5	14	9	1	10
Row Percent	64.3%	35.7%	100.0%	90.0%	10.0%	100.0%
Column Percent	2.7%	2.4%	2.6%	1.3%	.4%	1.1%
29	3	0	3	5	1	6
Row Percent	100.0%	0.0%	100.0%	83.3%	16.7%	100.0%
Column Percent	.9%	0.0%	.5%	.7%	.4%	.6%
30 to 34	4	6	10	17	2	19
Row Percent	40.0%	60.0%	100.00	89.5%	10.5%	100.0%
Column Percent	1.2%	2.9%	1.8%	2.4%	.8%	2.0%
35 to 39	3	5	8	2	0	2
Row Percent	37.5%	62.5%	100.0%	100.0%	0.0%	100.0%
Column Percent	.9%	2.4%	1.5%	.3%	0.0%	.2%
40 to 49	2	1	3	2	0	2
Row Percent	66.7%	33.3%	100.0%	100.0%	0.0%	100.0%
Column Percent	.6%	.5%	.5%	.3%	0.0%	.2%
TOTAL	338	209	547	695	257	952
Row Percent	61.8%	38.2%	100.0%	73.0%	27.0%	100.0%
Column Percent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

TABLE D-2

CHEMISTRY and CHEMICAL ENGINEERING MASTER'S DEGREE RECIPIENTS
according to AGE and SEX
1986 Starting Salary Survey

	CHEMISTRY			CHEMICAL ENGINEERING		
	SEX					
	MEN	WOMEN	TOTAL	MEN	WOMEN	TOTAL
AGE CATEGORY						
21	0	1	1	2	2	4
Row Percent	0.0%	100.0%	100.0%	50.0%	50.0%	100.0%
Column Percent	0.0%	4.0%	1.4%	1.8%	6.1%	2.7%
22	1	0	1	0	1	1
Row Percent	100.0%	0.0%	100.0%	0.0%	100.0%	100.0%
Column Percent	2.3%	0.0%	1.4%	0.0%	3.0%	.7%
23	3	1	4	8	5	13
Row Percent	75.0%	25.0%	100.0%	61.5%	38.5%	100.0%
Column Percent	6.8%	4.0%	5.8%	7.1%	15.2%	8.9%
24	3	3	6	23	6	29
Row Percent	50.0%	50.0%	100.0%	79.3%	20.7%	100.0%
Column Percent	6.8%	12.0%	8.7%	20.4%	18.2%	19.9%
25	3	3	6	26	9	35
Row Percent	50.0%	50.0%	100.0%	74.3%	25.7%	100.0%
Column Percent	6.8%	12.0%	8.7%	23.0%	27.3%	24.0%
26	4	4	8	17	5	22
Row Percent	50.0%	50.0%	100.0%	77.3%	22.7%	100.0%
Column Percent	9.1%	16.0%	11.6%	15.0%	15.2%	15.1%
27	7	4	11	9	3	12
Row Percent	63.6%	36.4%	100.0%	75.0%	25.0%	100.0%
Column Percent	15.9%	16.0%	15.9%	8.0%	9.1%	8.2%
28	5	2	7	6	2	8
Row Percent	71.4%	28.6%	100.0%	75.0%	25.0%	100.0%
Column Percent	11.4%	8.0%	10.1%	5.3%	6.1%	5.5%
29	2	0	2	3	0	3
Row Percent	100.0%	0.0%	100.0%	100.0%	0.0%	100.0%
Column Percent	4.5%	0.0%	2.9%	2.7%	0.0%	2.1%
30 to 34	10	3	13	13	0	13
Row Percent	76.9%	23.1%	100.0%	100.0%	0.0%	100.0%
Column Percent	22.7%	12.0%	18.8%	11.5%	0.0%	8.9%
35 to 39	6	2	8	4	0	4
Row Percent	75.0%	25.0%	100.0%	100.0%	0.0%	100.0%
Column Percent	13.6%	8.0%	11.6%	3.5%	0.0%	2.7%
40 to 49	0	2	2	1	0	1
Row Percent	0.0%	100.0%	100.0%	100.0%	0.0%	100.0%
Column Percent	0.0%	8.0%	2.9%	.9%	0.0%	.7%
50 to 64	0	0	0	1	0	1
Row Percent	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%
Column Percent	0.0%	0.0%	0.0%	.9%	0.0%	.7%
TOTAL	44	25	69	113	33	146
Row Percent	63.8%	36.2%	100.0%	77.4%	22.6%	100.0%
Column Percent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

TABLE D-3

CHEMISTRY and CHEMICAL ENGINEERING DOCTORATE'S DEGREE RECIPIENTS
according to AGE and SEX
1986 Starting Salary Survey

	CHEMISTRY			CHEMICAL ENGINEERING		
	SEX					
	MEN	WOMEN	TOTAL	MEN	WOMEN	TOTAL
AGE CATEGORY						
24	0	0	0	1	0	1
Row Percent	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%
Column Percent	0.0%	0.0%	0.0%	1.3%	0.0%	1.1%
25	0	1	1	2	0	2
Row Percent	0.0%	100.0%	100.0%	100.0%	0.0%	100.0%
Column Percent	0.0%	4.2%	.8%	2.6%	0.0%	2.1%
26	7	1	8	5	3	8
Row Percent	87.5%	12.5%	100.0%	62.5%	37.5%	100.0%
Column Percent	6.9%	4.2%	6.4%	6.4%	17.6%	8.4%
27	24	1	25	16	4	20
Row Percent	96.0%	4.0%	100.0%	80.0%	20.0%	100.0%
Column Percent	23.8%	4.2%	20.0%	20.5%	23.5%	21.1%
28	28	5	33	18	2	20
Row Percent	84.8%	15.2%	100.0%	90.0%	10.0%	100.0%
Column Percent	27.7%	20.8%	26.4%	23.1%	11.8%	21.1%
29	9	1	10	15	1	16
Row Percent	90.0%	10.0%	100.0%	93.8%	6.3%	100.0%
Column Percent	8.9%	4.2%	8.0%	19.2%	5.9%	16.8%
30 to 34	21	10	31	14	6	20
Row Percent	67.7%	32.3%	100.0%	70.0%	30.0%	100.0%
Column Percent	20.8%	41.7%	24.8%	17.9%	35.3%	21.1%
35 to 39	7	0	7	5	1	6
Row Percent	100.0%	0.0%	100.0%	83.3%	16.7%	100.0%
Column Percent	6.9%	0.0%	5.6%	6.4%	5.9%	6.3%
40 to 49	3	5	8	1	0	1
Row Percent	37.5%	62.5%	100.0%	100.0%	0.0%	100.0%
Column Percent	3.0%	20.8%	6.4%	1.3%	0.0%	1.1%
50 to 64	2	0	2	1	0	1
Row Percent	100.0%	0.0%	100.0%	100.0%	0.0%	100.0%
Column Percent	2.0%	0.0%	1.6%	1.3%	0.0%	1.1%
TOTAL	101	24	125	78	17	95
Row Percent	80.8%	19.2%	100.0%	82.1%	17.9%	100.0%
Column Percent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

TABLE D-4

CHEMISTRY POSTDOCTORAL RECIPIENTS
according to AGE and SEX
1988 Starting Salary Survey

	SEX		
	MEN	WOMEN	TOTAL
AGE			
21	4	13	17
Row Percent	23.5%	76.5%	100.0%
Column Percent	2.6%	21.3%	7.9%
22	63	20	83
Row Percent	75.9%	24.1%	100.0%
Column Percent	40.5%	32.8%	38.4%
23	14	8	22
Row Percent	63.6%	36.4%	100.0%
Column Percent	9.0%	13.1%	10.2%
24	6	3	9
Row Percent	66.7%	33.3%	100.0%
Column Percent	3.9%	4.9%	4.2%
25	2	2	4
Row Percent	50.0%	50.0%	100.0%
Column Percent	1.3%	3.3%	1.9%
26	6	1	7
Row Percent	85.7%	14.3%	100.0%
Column Percent	3.9%	1.6%	3.2%
27	14	2	16
Row Percent	87.5%	12.5%	100.0%
Column Percent	9.0%	3.3%	7.4%
28	14	2	21
Row Percent	66.7%	9.5%	100.0%
Column Percent	9.0%	3.3%	9.7%
29	4	0	4
Row Percent	100.0%	0.0%	100.0%
Column Percent	2.6%	0.0%	1.9%
30	1	1	2
Row Percent	50.0%	50.0%	100.0%
Column Percent	.6%	1.6%	.9%
31	6	3	9
Row Percent	66.7%	33.3%	100.0%
Column Percent	3.9%	4.9%	4.2%
32	3	4	7
Row Percent	42.9%	57.1%	100.0%
Column Percent	1.9%	6.6%	3.2%
33	2	0	2
Row Percent	100.0%	0.0%	100.0%
Column Percent	1.3%	0.0%	.9%
34	2	0	2
Row Percent	100.0%	0.0%	100.0%
Column Percent	1.3%	0.0%	.9%
35	1	0	1
Row Percent	100.0%	0.0%	100.0%
Column Percent	.6%	0.0%	.5%
37	0	1	1
Row Percent	0.0%	100.0%	100.0%
Column Percent	0.0%	1.6%	.5%
38	1	1	2
Row Percent	50.0%	50.0%	100.0%
Column Percent	.6%	1.6%	.9%
39	0	1	1
Row Percent	0.0%	100.0%	100.0%
Column Percent	0.0%	1.6%	.5%
41	1	0	1
Row Percent	100.0%	0.0%	100.0%
Column Percent	.6%	0.0%	.5%
42	0	1	1
Row Percent	0.0%	100.0%	100.0%
Column Percent	0.0%	1.6%	.5%
46	0	1	1
Row Percent	0.0%	100.0%	100.0%
Column Percent	0.0%	1.6%	.5%
TOTAL	155	61	216
Row Percent	71.8%	28.2%	100.0%
Column Percent	100.0%	100.0%	100.0%

TABLE E-1

FULL-TIME EMPLOYED INEXPERIENCED CHEMISTS
according to NUMBER OF JOB OFFERS, SEX, and DEGREE
1986 Starting Salary Survey

	BACHELORS			MASTERS			DOCTORATE		
	SEX								
	MEN	WOMEN	TOTAL	MEN	WOMEN	TOTAL	MEN	WOMEN	TOTAL
NUMBER OF JOB OFFERS									
1	36	34	70	8	3	11	15	1	16
Row Percent	51.4%	48.6%	100.0%	72.7%	27.3%	100.0%	93.8%	6.3%	100.0%
Column Percent	43.9%	57.6%	49.6%	80.0%	42.9%	64.7%	42.9%	14.3%	38.1%
2	26	10	36	0	2	2	7	3	10
Row Percent	72.2%	27.8%	100.0%	0.0%	100.0%	100.0%	70.0%	30.0%	100.0%
Column Percent	31.7%	16.9%	25.5%	0.0%	28.6%	11.8%	20.0%	42.9%	23.8%
3	15	5	20	1	1	2	8	2	10
Row Percent	75.0%	25.0%	100.0%	50.0%	50.0%	100.0%	80.0%	20.0%	100.0%
Column Percent	18.3%	8.5%	14.2%	10.0%	14.3%	11.8%	22.9%	28.6%	23.8%
4	3	8	11	0	1	1	3	1	4
Row Percent	27.3%	72.7%	100.0%	0.0%	100.0%	100.0%	75.0%	25.0%	100.0%
Column Percent	3.7%	13.6%	7.8%	0.0%	14.3%	5.9%	8.6%	14.3%	9.5%
5	1	1	2	0	0	0	1	0	1
Row Percent	50.0%	50.0%	100.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%
Column Percent	1.2%	1.7%	1.4%	0.0%	0.0%	0.0%	2.9%	0.0%	2.4%
6 or 7	1	1	2	0	0	0	0	0	0
Row Percent	50.0%	50.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Column Percent	1.2%	1.7%	1.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
8 or 9	0	0	0	0	0	0	1	0	1
Row Percent	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%
Column Percent	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.9%	0.0%	2.4%
10 or more	0	0	0	1	0	1	0	0	0
Row Percent	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	0.0%	0.0%	0.0%
Column Percent	0.0%	0.0%	0.0%	10.0%	0.0%	5.9%	0.0%	0.0%	0.0%
TOTAL	82	59	141	10	7	17	35	7	42
Row Percent	58.2%	41.8%	100.0%	58.8%	41.2%	100.0%	83.3%	16.7%	100.0%
Column Percent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

TABLE E-2

FULL-TIME EMPLOYED EXPERIENCED CHEMISTS
according to NUMBER OF JOB OFFERS, SEX, and DEGREE
1986 Starting Salary Survey

	BACHELORS			MASTERS			DOCTORATE		
	SEX								
	MEN	WOMEN	TOTAL	MEN	WOMEN	TOTAL	MEN	WOMEN	TOTAL
NUMBER OF JOB OFFERS									
1	8	10	18	6	1	7	6	2	8
Row Percent	44.4%	55.6%	100.0%	85.7%	14.3%	100.0%	75.0%	25.0%	100.0%
Column Percent	34.8%	45.5%	40.0%	66.7%	33.3%	58.3%	46.2%	66.7%	50.0%
2	9	6	15	1	1	2	4	0	4
Row Percent	60.0%	40.0%	100.0%	50.0%	50.0%	100.0%	100.0%	0.0%	100.0%
Column Percent	39.1%	27.3%	33.3%	11.1%	33.3%	16.7%	30.8%	0.0%	25.0%
3	4	3	7	1	1	2	2	0	2
Row Percent	57.1%	42.9%	100.0%	50.0%	50.0%	100.0%	100.0%	0.0%	100.0%
Column Percent	17.4%	13.6%	15.6%	11.1%	33.3%	16.7%	15.4%	0.0%	12.5%
4	1	2	3	1	0	1	1	1	2
Row Percent	33.3%	66.7%	100.0%	100.0%	0.0%	100.0%	50.0%	50.0%	100.0%
Column Percent	4.3%	9.1%	6.7%	11.1%	0.0%	8.3%	7.7%	33.3%	12.5%
5	0	1	1	0	0	0	0	0	0
Row Percent	0.0%	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Column Percent	0.0%	4.5%	2.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
8 or 9	1	0	1	0	0	0	0	0	0
Row Percent	100.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Column Percent	4.3%	0.0%	2.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
TOTAL	23	22	45	9	3	12	13	3	16
Row Percent	51.1%	48.9%	100.0%	75.0%	25.0%	100.0%	81.3%	18.8%	100.0%
Column Percent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

TABLE E-3

FULL-TIME EMPLOYED INEXPERIENCED CHEMICAL ENGINEERS
according to NUMBER OF JOB OFFERS, SEX, and DEGREE
1986 Starting Salary Survey

	BACHELORS			MASTERS			DOCTORATE		
	SEX								
	MEN	WOMEN	TOTAL	MEN	WOMEN	TOTAL	MEN	WOMEN	TOTAL
NUMBER OF JOB OFFERS									
1	141	61	202	11	6	17	10	2	12
Row Percent	69.8%	30.2%	100.0%	64.7%	35.3%	100.0%	83.3%	16.7%	100.0%
Column Percent	51.8%	46.2%	50.0%	34.4%	75.0%	42.5%	25.0%	28.6%	25.5%
2	68	39	107	11	1	12	11	2	13
Row Percent	63.6%	36.4%	100.0%	91.7%	8.3%	100.0%	84.6%	15.4%	100.0%
Column Percent	25.0%	29.5%	26.5%	34.4%	12.5%	30.0%	27.5%	28.6%	27.7%
3	32	18	50	5	0	5	5	0	5
Row Percent	64.0%	36.0%	100.0%	100.0%	0.0%	100.0%	100.0%	0.0%	100.0%
Column Percent	11.8%	13.6%	12.4%	15.6%	0.0%	12.5%	12.5%	0.0%	10.6%
4	9	8	17	1	0	1	3	1	4
Row Percent	52.9%	47.1%	100.0%	100.0%	0.0%	100.0%	75.0%	25.0%	100.0%
Column Percent	3.3%	6.1%	4.2%	3.1%	0.0%	2.5%	7.5%	14.3%	8.5%
5	9	5	14	0	1	1	5	2	7
Row Percent	64.3%	35.7%	100.0%	0.0%	100.0%	100.0%	71.4%	28.6%	100.0%
Column Percent	3.3%	3.8%	3.5%	0.0%	12.5%	2.5%	12.5%	28.6%	14.9%
6 or 7	8	1	9	2	0	2	4	0	4
Row Percent	88.9%	11.1%	100.0%	100.0%	0.0%	100.0%	100.0%	0.0%	100.0%
Column Percent	2.9%	.8%	2.2%	6.3%	0.0%	5.0%	10.0%	0.0%	8.5%
8 or 9	3	0	3	1	0	1	1	0	1
Row Percent	100.0%	0.0%	100.0%	100.0%	0.0%	100.0%	100.0%	0.0%	100.0%
Column Percent	1.1%	0.0%	.7%	3.1%	0.0%	2.5%	2.5%	0.0%	2.1%
10 or more	2	0	2	1	0	1	1	0	1
Row Percent	100.0%	0.0%	100.0%	100.0%	0.0%	100.0%	100.0%	0.0%	100.0%
Column Percent	.7%	0.0%	.5%	3.1%	0.0%	2.5%	2.5%	0.0%	2.1%
TOTAL	272	132	404	32	8	40	40	7	47
Row Percent	67.3%	32.7%	100.0%	80.0%	20.0%	100.0%	85.1%	14.9%	100.0%
Column Percent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

TABLE E-4

FULL-TIME EMPLOYED EXPERIENCED CHEMICAL ENGINEERS
according to NUMBER OF JOB OFFERS, SEX, and DEGREE
1986 Starting Salary Survey

	BACHELORS			MASTERS			DOCTORATE		
	SEX								
	MEN	WOMEN	TOTAL	MEN	WOMEN	TOTAL	MEN	WOMEN	TOTAL
NUMBER OF JOB OFFERS									
1	41	10	51	5	1	6	4	1	5
Row Percent	80.4%	19.6%	100.0%	83.3%	16.7%	100.0%	80.0%	20.0%	100.0%
Column Percent	45.6%	35.7%	43.2%	45.5%	11.1%	30.0%	18.2%	16.7%	17.9%
2	30	11	41	3	3	6	6	3	9
Row Percent	73.2%	26.8%	100.0%	50.0%	50.0%	100.0%	66.7%	33.3%	100.0%
Column Percent	33.3%	39.3%	34.7%	27.3%	33.3%	30.0%	27.3%	50.0%	32.1%
3	7	3	10	1	3	4	8	1	9
Row Percent	70.0%	30.0%	100.0%	25.0%	75.0%	100.0%	88.9%	11.1%	100.0%
Column Percent	7.8%	10.7%	8.5%	9.1%	33.3%	20.0%	36.4%	16.7%	32.1%
4	5	2	7	0	1	1	1	0	1
Row Percent	71.4%	28.6%	100.0%	0.0%	100.0%	100.0%	100.0%	0.0%	100.0%
Column Percent	5.6%	7.1%	5.9%	0.0%	11.1%	5.0%	4.5%	0.0%	3.6%
5	3	0	3	1	1	2	3	0	3
Row Percent	100.0%	0.0%	100.0%	50.0%	50.0%	100.0%	100.0%	0.0%	100.0%
Column Percent	3.3%	0.0%	2.5%	9.1%	11.1%	10.0%	13.6%	0.0%	10.7%
6 or 7	0	1	1	1	0	1	0	0	0
Row Percent	0.0%	100.0%	100.0%	100.0%	0.0%	100.0%	0.0%	0.0%	0.0%
Column Percent	0.0%	3.6%	.8%	9.1%	0.0%	5.0%	0.0%	0.0%	0.0%
8 or 9	3	0	3	0	0	0	0	0	0
Row Percent	100.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Column Percent	3.3%	0.0%	2.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
10 or more	1	1	2	0	0	0	0	1	1
Row Percent	50.0%	50.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
Column Percent	1.1%	3.6%	1.7%	0.0%	0.0%	0.0%	0.0%	16.7%	3.6%
TOTAL	90	28	118	11	9	20	22	6	28
Row Percent	76.3%	23.7%	100.0%	55.0%	45.0%	100.0%	78.6%	21.4%	100.0%
Column Percent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

TABLE 3-1

CHEMISTRY GRADUATES
BY RACE/ETHNICITY, ETHNICITY, AND DEGREE
1988 Starting Salary Survey

	BACHELORS							MASTERS							DOCTORATE						
	RACIAL OR ETHNIC GROUP																				
	WHITE	BLACK	HISPANIC	AMER. INDIAN	ASIAN	OTHER	TOTAL	WHITE	BLACK	HISPANIC	AMER. INDIAN	ASIAN	OTHER	TOTAL	WHITE	BLACK	HISPANIC	AMER. INDIAN	ASIAN	OTHER	TOTAL
CITIZENSHIP																					
								56	1	0	0	0	1	58	100	0	0	0	2	0	102
U.S.-NATIVE	325	11	8	0	5		367	94.8%	1.1%	0.0%	0.0%	1.7%	0.0%	100.0%	98.0%	0.0%	0.0%	0.0%	2.0%	0.0%	100.0%
Row Percent	88.5%	3.0%	2.2%	0%	1.4%	0%	100.0%	55.6%	11.1%	0.0%	0.0%	10.0%	0.0%	84.1%	95.2%	0.0%	0.0%	0.0%	11.1%	0.0%	81.6%
Column Percent	97.3%	84.6%	88.9%	0.0%	83.3%	0.0%	94.1%														
U.S.-NATURALIZED	9	2	1	0	1		23	11.1%	0.0%	0.0%	0.0%	11.1%	0.0%	100.0%	33.3%	0.0%	0.0%	0.0%	33.3%	0.0%	100.0%
Row Percent	39.1%	8.7%	4.3%	0.0%	4.3%	0.0%	100.0%	1.7%	11.1%	0.0%	0.0%	10.0%	0.0%	4.1%	1.9%	0.0%	0.0%	0.0%	11.1%	0.0%	3.2%
Column Percent	2.7%	15.4%	11.1%	0.0%	16.7%	0.0%	5.9%														
PERMANENT RESIDENT	1	0	0	0	1	0	2	1	0	0	0	0	0	1	0	0	1	0	4	0	5
Column Percent	33.3%	0.0%	0.0%	0.0%	33.3%	0.0%	100.0%	1.7%	0.0%	66.7%	0.0%	0.0%	0.0%	4.1%	0.0%	0.0%	100.0%	0.0%	22.2%	0.0%	4.0%
OTHER VISA	1	0	0	0	0	0	1	0	0	0	0	0	1	1	1	0	0	0	13	1	14
Row Percent	33.3%	33.3%	33.3%	0.0%	33.3%	33.3%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	4.1%	7.1%	0.0%	0.0%	0.0%	92.9%	7.1%	100.0%
Column Percent	0.3%	7.7%	11.1%	0.0%	16.7%	33.3%	2.9%	0.0%	0.0%	33.3%	0.0%	10.0%	100.0%	4.1%	0.9%	0.0%	0.0%	0.0%	59.1%	100.0%	11.2%
TOTAL	335	13	9	0	7	1	365	58	1	1	0	9	2	24	105	0	1	0	19	1	126
Row Percent	91.8%	3.6%	2.5%	0%	1.9%	0%	100.0%	84.1%	1.4%	1.4%	0.0%	12.9%	2.9%	100.0%	84.0%	0.0%	.8%	0.0%	14.4%	.8%	100.0%
Column Percent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	0.0%	100.0%	100.0%	100.0%	100.0%	0.0%	100.0%	0.0%	100.0%	100.0%	100.0%

TABLE F-2

CHEMISTRY GRADUATES
according to CITIZENSHIP, SEX, and DEGREE
1986 Starting Salary Survey

	BACHELORS			MASTERS			DOCTORATE		
	SEX								
	MEN	WOMEN	TOTAL	MEN	WOMEN	TOTAL	MEN	WOMEN	TOTAL
CITIZENSHIP									
US NATIVE	319	199	518	38	20	58	83	19	102
Row Percent	61.6%	38.4%	100.0%	65.5%	34.5%	100.0%	81.4%	18.6%	100.0%
Column Percent	94.1%	93.9%	94.0%	86.4%	80.0%	84.1%	82.2%	79.2%	81.6%
US NATURALIZED	14	7	21	1	2	3	1	3	4
Row Percent	66.7%	33.3%	100.0%	33.3%	66.7%	100.0%	25.0%	75.0%	100.0%
Column Percent	4.1%	3.3%	3.8%	2.3%	8.0%	4.3%	1.0%	12.5%	3.2%
PERMANENT RESIDENT	3	4	7	0	3	3	5	0	5
Row Percent	42.9%	57.1%	100.0%	0.0%	100.0%	100.0%	100.0%	0.0%	100.0%
Column Percent	.9%	1.9%	1.3%	0.0%	12.0%	4.3%	5.0%	0.0%	4.0%
OTHER VISA	3	2	5	5	0	5	12	2	14
Row Percent	60.0%	40.0%	100.0%	100.0%	0.0%	100.0%	85.7%	14.3%	100.0%
Column Percent	.9%	.9%	.9%	11.4%	0.0%	7.2%	11.9%	8.3%	11.2%
TOTAL	339	212	551	44	25	69	101	24	125
Row Percent	61.5%	38.5%	100.0%	63.8%	36.2%	100.0%	80.8%	19.2%	100.0%
Column Percent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

TABLE F-3

MINORITY CHEMISTRY GRADUATES
according to MINORITY CLASSIFICATION, SEX, AND DEGREE
1986 Starting Salary Survey

	BACHELORS			MASTERS			DOCTORATE		
	SEX								
	MEN	WOMEN	TOTAL	MEN	WOMEN	TOTAL	MEN	WOMEN	TOTAL
MINORITY CLASSIFICATION									
BLACK	7	6	13	2	1	3	0	0	0
Row Percent	53.8%	46.2%	100.0%	66.7%	33.3%	100.0%	0.0%	0.0%	0.0%
Column Percent	25.9%	22.2%	24.1%	28.6%	25.0%	27.3%	0.0%	0.0%	0.0%
HISPANIC	8	5	13	1	2	3	1	0	1
Row Percent	61.5%	38.5%	100.0%	33.3%	66.7%	100.0%	100.0%	0.0%	100.0%
Column Percent	29.6%	18.5%	24.1%	14.3%	50.0%	27.3%	5.9%	0.0%	5.0%
AMER INDIAN	1	2	3	0	0	0	0	0	0
Row Percent	33.3%	66.7%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Column Percent	3.7%	7.4%	5.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
ASIAN	9	12	21	3	1	4	15	3	18
Row Percent	42.9%	57.1%	100.0%	75.0%	25.0%	100.0%	83.3%	16.7%	100.0%
Column Percent	33.3%	44.4%	38.9%	42.9%	25.0%	36.4%	88.2%	100.0%	90.0%
OTHER	2	2	4	1	0	1	1	0	1
Row Percent	50.0%	50.0%	100.0%	100.0%	0.0%	100.0%	100.0%	0.0%	100.0%
Column Percent	7.4%	7.4%	7.4%	14.3%	0.0%	9.1%	5.9%	0.0%	5.0%
TOTAL	27	27	54	7	4	11	17	3	20
Row Percent	50.0%	50.0%	100.0%	63.6%	36.4%	100.0%	85.0%	15.0%	100.0%
Column Percent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

TABLE F-4

CHEMICAL ENGINEERING GRADUATES
according to CITIZENSHIP, ETHNICITY, and DEGREE
1986 Starting Salary Survey

	BACHELORS						MASTERS						DOCTORATE					
	MINORITY CLASSIFICATION																	
	WHITE	BLACK	HISPANIC	ASIAN	OTHER	TOTAL	WHITE	BLACK	HISPANIC	ASIAN	OTHER	TOTAL	WHITE	BLACK	HISPANIC	ASIAN	OTHER	TOTAL
CITIZENSHIP																		
US NATIVE	850	15	11	19	3	898	96	0	2	9	0	107	60	1	2	0	0	63
Row Percent	94.7%	1.7%	1.2%	2.1%	.3%	100.0%	89.7%	0.0%	1.9%	8.4%	0.0%	100.0%	95.2%	1.6%	3.2%	0.0%	0.0%	100.0%
Column Percent	97.3%	88.2%	84.6%	45.2%	50.0%	94.3%	92.3%	0.0%	66.7%	28.1%	0.0%	74.8%	92.3%	50.0%	33.3%	0.0%	0.0%	66.3%
US NATURALIZED	14	0	0	15	0	29	2	0	0	4	0	6	0	0	0	2	0	2
Row Percent	48.3%	0.0%	0.0%	51.7%	0.0%	100.0%	33.3%	0.0%	0.0%	66.7%	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%
Column Percent	1.6%	0.0%	0.0%	35.7%	0.0%	3.0%	1.9%	0.0%	0.0%	12.5%	0.0%	4.2%	0.0%	0.0%	0.0%	9.1%	0.0%	2.1%
PERMANENT RESIDENT	8	2	2	7	2	21	2	2	0	8	0	12	2	1	0	8	0	11
Row Percent	38.1%	9.5%	9.5%	33.3%	9.5%	100.0%	16.7%	16.7%	0.0%	66.7%	0.0%	100.0%	18.2%	9.1%	0.0%	72.7%	0.0%	100.0%
Column Percent	9%	11.8%	15.4%	16.7%	33.3%	2.2%	1.9%	66.7%	0.0%	25.0%	0.0%	8.4%	3.1%	50.0%	0.0%	36.4%	0.0%	11.6%
OTHER VISA	2	0	0	1	1	4	4	1	1	11	1	18	3	0	4	12	0	19
Row Percent	50.0%	0.0%	0.0%	25.0%	25.0%	100.0%	22.2%	5.6%	5.6%	61.1%	5.6%	100.0%	15.8%	0.0%	21.1%	63.2%	0.0%	100.0%
Column Percent	.2%	0.0%	0.0%	2.4%	16.7%	.4%	3.8%	33.3%	33.3%	34.4%	100.0%	12.6%	4.6%	0.0%	66.7%	54.5%	0.0%	20.0%
TOTAL	874	17	13	42	6	952	104	3	3	32	1	143	65	2	6	22	0	95
Row Percent	91.8%	1.8%	1.4%	4.4%	.6%	100.0%	72.7%	2.1%	2.1%	22.4%	.7%	100.0%	68.4%	2.1%	6.3%	23.2%	0.0%	100.0%
Column Percent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	0.0%	100.0%

TABLE F-5

CHEMICAL ENGINEERING GRADUATES
according to CITIZENSHIP, SEX, and DEGREE
1986 Starting Salary Survey

	BACHELORS			MASTERS			DOCTORATE		
	SEX								
	MEN	WOMEN	TOTAL	MEN	WOMEN	TOTAL	MEN	WOMEN	TOTAL
CITIZENSHIP									
US NATIVE	658	240	898	78	31	109	50	13	63
Row Percent	73.3%	26.7%	100.0%	71.6%	28.4%	100.0%	79.4%	20.6%	100.0%
Column Percent	94.7%	93.4%	94.3%	69.0%	93.9%	74.7%	64.1%	76.5%	66.3%
US NATURALIZED	17	12	29	5	1	6	2	0	2
Row Percent	58.6%	41.4%	100.0%	83.3%	16.7%	100.0%	100.0%	0.0%	100.0%
Column Percent	2.4%	4.7%	3.0%	4.4%	3.0%	4.1%	2.6%	0.0%	2.1%
PERMANENT RESIDENT	17	4	21	11	1	12	8	3	11
Row Percent	81.0%	19.0%	100.0%	91.7%	8.3%	100.0%	72.7%	27.3%	100.0%
Column Percent	2.4%	1.5%	2.2%	9.7%	3.0%	8.2%	10.3%	17.6%	11.6%
OTHER VISA	3	1	4	19	0	19	18	1	19
Row Percent	75.0%	25.0%	100.0%	100.0%	0.0%	100.0%	94.7%	5.3%	100.0%
Column Percent	.4%	.4%	.4%	16.8%	0.0%	13.0%	23.1%	5.9%	20.0%
TOTAL	695	257	952	113	33	146	78	17	95
Row Percent	73.0%	27.0%	100.0%	77.4%	22.6%	100.0%	82.1%	17.9%	100.0%
Column Percent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

TABLE F-6

MINORITY CHEMICAL ENGINEERING GRADUATES
according to MINORITY CLASSIFICATION, SEX, AND DEGREE
1986 Starting Salary Survey

	BACHELORS			MASTERS			DOCTORATE		
	SEX								
	MEN	WOMEN	TOTAL	MEN	WOMEN	TOTAL	MEN	WOMEN	TOTAL
RACIAL OR ETHNIC GROUP									
BLACK	11	6	17	3	0	3	1	1	2
Row Percent	64.7%	35.3%	100.0%	100.0%	0.0%	100.0%	50.0%	50.0%	100.0%
Column Percent	19.6%	27.3%	21.8%	8.8%	0.0%	7.7%	4.0%	20.0%	6.7%
HISPANIC	12	1	13	3	0	3	5	1	6
Row Percent	92.3%	7.7%	100.0%	100.0%	0.0%	100.0%	83.3%	16.7%	100.0%
Column Percent	21.4%	4.5%	16.7%	8.8%	0.0%	7.7%	20.0%	20.0%	20.0%
ASIAN	27	15	42	27	5	32	19	3	22
Row Percent	64.3%	35.7%	100.0%	84.4%	15.6%	100.0%	86.4%	13.6%	100.0%
Column Percent	48.2%	68.2%	53.8%	79.4%	100.0%	82.1%	76.0%	60.0%	73.3%
OTHER	6	0	6	1	0	1	0	0	0
Row Percent	100.0%	0.0%	100.0%	100.0%	0.0%	100.0%	0.0%	0.0%	0.0%
Column Percent	10.7%	0.0%	7.7%	2.9%	0.0%	2.6%	0.0%	0.0%	0.0%
TOTAL	56	22	78	34	5	39	25	5	30
Row Percent	71.8%	28.2%	100.0%	87.2%	12.8%	100.0%	83.3%	16.7%	100.0%
Column Percent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

American Chemical Society

OFFICE OF THE
EXECUTIVE DIRECTOR

1155 SIXTEENTH STREET, N.W.
WASHINGTON, D.C. 20036
Phone (202) 872-4600

Summer 1986

Dear Colleague:

For many years, the American Chemical Society has gathered information about the starting salaries and employment status of chemistry and chemical engineering graduates through annual mail surveys of both ACS member and nonmember graduates. The data collected from these surveys have been very useful to chemists and chemical engineers, particularly as they start their careers, and the publication of such data has had a beneficial effect on salary levels. The data from these surveys have gained a reputation for reliability and usefulness.

I urge you, as a service to your colleagues and profession, to respond to this year's questionnaire. As a special incentive, the ACS is offering free airfare to, and meeting registration for, one of the 1987 ACS national meetings. This will be awarded to one randomly-selected respondent. (Hotel accommodations and all other expenses will be borne by the winner.) The winner will have the choice of attending the Denver national meeting in April 1987 or the New Orleans national meeting in August 1987. Please take a few minutes now to fill out the enclosed questionnaire, whether or not you have already accepted employment.

No personal identification is required or requested; the returns will be anonymous. To assure anonymity, while at the same time allowing us to determine a winner, a unique five-digit ID number has been written on each questionnaire. A computer program will generate a randomly-selected number corresponding to one of these approximately 12,000 ID numbers. A list correlating the ID numbers with the names and addresses of the respondents is kept separately, and will be available only for identifying the winner.

Please complete as many items on the questionnaire as possible and return it promptly. For your convenience, I have enclosed a self-addressed, postage-paid envelope. Results of the survey will be published in the CHEMICAL AND ENGINEERING NEWS' Career Issue this October and in a more extensive report later in the year.

Thank you for your assistance with this survey. I extend my best wishes for every success in your professional pursuits.

Sincerely,

John K Crum

John K Crum

Enclosure

AMERICAN CHEMICAL SOCIETY

Survey of Starting Salaries and Employment Status of 1986 Chemistry and Chemical Engineering Graduates

1. Highest degree earned:
- Bachelor's ☐ 1
- Master's ☐ 2
- Doctorate ☐ 3

2. Field of highest degree:
- Chemical engineering ☐ 1
- Biochemistry ☐ 2
- Analytical chemistry ☐ 3
- Inorganic chemistry ☐ 4
- Organic chemistry ☐ 5
- Physical chemistry ☐ 6
- Polymer chemistry ☐ 7
- Other chemistry ☐ 8
- Other ☐ 9

3. Professional or technical work experience prior to graduation
- Less than 12 months (or none) ☐ 1
- 12 to 36 months ☐ 2
- More than 36 months ☐ 3

4. Did you participate in a chemistry or chemical engineering cooperative education program while in college or graduate school?
- Yes ☐ 1
- No ☐ 2

5. Age at last birthday: ☐☐ years old

6. Sex:
- Male ☐ 1
- Female ☐ 2

7. Citizenship or visa status:
- U.S. native ☐ 1
- U.S. naturalized ☐ 2
- U.S. permanent resident visa ☐ 3
- Other visa ☐ 4

8. Racial or ethnic group:
- White (not of Hispanic origin) ☐ 1
- Black (not of Hispanic origin) ☐ 2
- Hispanic ☐ 3
- American Indian or Alaskan Native ☐ 4
- Asian or Pacific Islander ☐ 5
- Other race or ethnic group ☐ 6

9. Will you pursue advanced studies in the fall of 1986?
- No ☐ 1
- Yes, full-time ☐ 2
- Yes, part-time ☐ 3

a. If yes, field of further studies:
- Chemistry ☐ 01
- Other physical science or math ☐ 02
- Chemical engineering ☐ 03
- Other engineering ☐ 04
- Biochemistry ☐ 05
- Life science ☐ 06
- Medicine ☐ 07
- Dentistry ☐ 08
- Pharmacy, pharmacology ☐ 09
- Business management ☐ 10
- Education ☐ 11
- Law ☐ 12
- Other ☐ 13

10. Current employment status:
- Accepted or continuing full-time employment (excluding summer employment) ☐ 1
- Accepted a graduate assistantship, fellowship or postdoctoral fellowship ☐ 2
- Not employed, employed part-time or for summer only:
  - and seeking full-time, year-round employment ☐ 3
  - and not seeking full-time, year-round employment ☐ 4

IF YOU CHECKED NUMBER 3 or 4, PLEASE STOP HERE AND RETURN THE QUESTIONNAIRE IN THE ENVELOPE PROVIDED

11. Your annual salary: $ _____ per year

IF YOU HOLD AN ASSISTANTSHIP OR FELLOWSHIP, PLEASE STOP HERE AND RETURN THE QUESTIONNAIRE IN THE ENVELOPE PROVIDED.

12. How many firm offers of employment did you receive in a field of chemistry or chemical engineering?

Specify number _____

13. How did you find out about your current job?
(Check the one that BEST applies)
- ACS Services
  - C&EN classifieds ☐ 01
  - National/regional meeting employment services ☐ 02
  - Local section contacts ☐ 03
- Services of other professional organizations ☐ 04
- Personal initiative ☐ 05
- Campus recruiting/placement office ☐ 06
- Newspaper ad ☐ 07
- Personal contact/employee referral ☐ 08
- State or federal employment service ☐ 09
- Employment agency ☐ 10
- Other ☐ 11

14. Check the one specialty most related to your job:
- Chemical engineering ☐ 1
- Chemistry (including biochemistry) ☐ 2
- Other ☐ 3

15. How long have you been working for your current employer?
- 12 months or less ☐ 1
- More than 12 months ☐ 2

16. Check the one category that best describes your employer:
- Private industry ☐ 1
- College or university ☐ 2
- High school or other school ☐ 3
- Federal government (civilians only) ☐ 4
- Military ☐ 5
- State or local government ☐ 6
- Hospital or independent laboratory ☐ 7
- Other ☐ 8

THANK YOU FOR YOUR PARTICIPATION.
PLEASE RETURN THIS QUESTIONNAIRE TO
ACS STATISTICAL SERVICES,
Room 202, 1155 16th Street NW, Washington, DC 20036

Statistical Services
American Chemical Society
Washington, D.C.

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